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CAPTIONING OF TELEVISION BROADCASTS FROM THE SENATE CHAMBER

HEARING

BEFORE THE

COMMITTEE ON RULES AND ADMINISTRATION UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

THE FEASIBILITY OF PROVIDING CAPTIONING FOR THE HEARING IMPAIRED OF TELEVISION BROADCASTS FROM THE SENATE CHAMBER

OCTOBER 21, 1987

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The Committee expresses its appreciation to Mary Ann Royster, Saroja Sioud, and William Adams, who provided sign and voice interpretation of the conversations between Committee members and witnesses, and communication of the Committee's proceedings to the audience.

HEARING TO RECEIVE TESTIMONY ON THE FEASIBILITY OF PROVIDING CAPTIONING FOR THE HEARING IMPAIRED OF TELEVISION BROADCASTS FROM THE SENATE CHAMBER

WEDNESDAY, OCTOBER 21, 1987

U.S. SENATE,
COMMITTEE ON RULES AND ADMINISTRATION,
Washington, DC.

The committee met, pursuant to notice, at 9 a.m., in room 301, Russell Senate Office Building, Hon. Wendell H. Ford, chairman presiding.

Present: Senators Ford, Pell, Inouye, DeConcini, Dodd, Adams, Stevens, Warner, and Garn.

Staff present: William McW. Cochrane, senior adviser; Gerald W. Siegel, chief counsel; Gail S. Martin, chief clerk; Wayne A. Schley, minority staff director; John K. Swearingen, director, technical services; Elizabeth K. Bunch, minority professional staff member; Carole J. Blessington, assistant chief clerk; Martha Spenger, professional staff member; John Moremen, staff assistant.

Interpreters present: Mary Ann Royster, Saroja Sioud, and William Adams.

The CHAIRMAN. Good morning, ladies and gentlemen. We have scheduled this hearing to discuss the feasibility of captioning the Senate floor proceedings for the benefit of the deaf and hearing impaired.

Captioning is the process by which words appear on a television screen, relaying in a matter of seconds the audio portion of a televised program. In order to receive these captioned words, it is necessary to have a decoder attached to your television set which would be the individual's responsibility to obtain.

The Committee received many letters expressing support for captioning. Consequently, a task force made up of staff from the offices of the Architect of the Capitol, Computer Center, Joint Committee on Printing, Secretary of the Senate, Sergeant-at-Arms and Rules Committee was formed to explore this project. This hearing is to permit interested individuals an opportunity to express their views on this subject. It is a necessary step to determine if we should proceed further with this project.

We are pleased this morning to have the distinguished Senator from Iowa, Tom Harkin, who is very familiar and fluent, I under-

stand, in this procedure. Tom, we are delighted to have you this morning. If you want to go ahead and proceed, your statement will be included in the record as if given.

TESTIMONY OF HON. TOM HARKIN, A U.S. SENATOR FROM THE STATE OF IOWA

Senator HARKIN. Mr. Chairman, thank you very much. I appreciate that, and I will just insert my statement.

I am basically here, Mr. Chairman, just to give you some personal side stories on how important this captioning has been to the deaf community in the recent past. When I was a member of the House of Representatives, I was very much involved in the early days in the establishment of the National Captioning Institute and in getting the initial decoders built by Sears, Roebuck at that time. I remember I was at the White House when the first decoder was given to then President Carter and Mrs. Carter at the White House. I was down there with former Senator Jennings Randolph.

Again, as you may know, my personal interest stems from the fact that I have a deaf brother who has been deaf since he was about eight years old. Growing up with him, that is how I learned sign language. I through my lifetime have followed all of the different problems that he has had coping in society, from his earliest days in school through work and even in his periods of relaxation, trying to travel, trying to figure out how to do things.

Deafness is a lot different than being blind, for example. When a person is blind, you know that right away. They have a walking stick; they have a seeing eye dog. It is something that is very visible and very up front. But when you are deaf, people do not really know it. Unless you really start to converse with someone, you do not know it right away. A lot of times this causes immense problems for deaf people, as I said, in their trying to gain information, trying to find directions where to go, how to do things. It can just be an immense problem.

I can remember distinctly, as though it happened yesterday, when our family got our first TV set back in the 1950's. Of course, we had always listened to radio before that. We listened to all the radio programs on Sunday night, as I am sure maybe you did, Mr. Chairman, when you were a young kid. And my brother, of course—

The CHAIRMAN. I am much older than you. Mine was an Atwater-Kent.

Senator HARKIN. I had a crystal radio, too, once.

Anyway, I can remember he was never involved in listening to those radio programs. But when we got television, it was just like opening a whole new world to him, to be able to actually watch these television programs. Even then, he did not understand much of what was going on. He could read lips fairly well, but still, it was such a giant leap there to actually have him watch television programs.

Well, the years progressed, and I can then remember when I bought him his first decoder. Let us see, this would be not quite ten years ago, I guess. The leap from that, from just watching television to actually really understanding what was going on, again,

was just another tremendous step for him. He could now watch movies, watch programs, and actually really get 100 percent of what was going on on those programs.

I know from his friends and associates, too, that the decoders have just done a tremendous amount for, again, not only their enjoyment and their relaxation, but their information. Watching the news, just a simple, basic thing like watching the news and understanding what the news says.

That is why I feel this is so important. Well, I sort of had mixed feelings about televising the Senate proceedings, I must admit, in the beginning. But I guess it has turned out all right. I have had my brother numerous times tell me, "Oh, yes, I saw you on television. You were doing some debating, but what were you talking about? What was that all about when I saw you discussing things with that Senator from Kentucky or that Senator from Alaska? What was going on there?" So I would have to try to tell him what it was all about.

I just think that being able for the deaf community in this country to watch proceedings of the Senate with captioning in real time would be a great service for them, not only just for their own personal interest of knowing what is going on in the country—which I think is valuable in and of itself—but to gain the information they need to plan their lives, too. People gain a lot of information from watching televised proceedings.

I know many times my brother was saying that he sure wished he could have understood what was going on with the Iran-Contra hearing. He could watch it, but he did not really understand all of what everyone was saying.

So, Mr. Chairman, I am not an expert in the technical aspects of this. I am not certain that I know all of the problems that are involved in captioning the Senate. I watched one display by a vendor once of this, and it looked pretty good to me, where they were real-timing it and there was only about a four- or five-second delay. Even though some of the words are missing, believe me, it is remarkable in how much they can put on that screen to capture what an individual is saying in real time on the Senate floor.

I just urge your Committee, Mr. Chairman, to really give this not only serious consideration, but, within whatever cost constraints you have or anything like that, I would certainly hope this Committee would move expeditiously forward to do whatever is necessary to get this captioning in place as soon as possible.

[The prepared statement of Senator Harkin follows:]

PREPARED STATEMENT OF HON. TOM HARKIN, A U.S. SENATOR FROM THE STATE OF IOWA

Thank you, Mr. Chairman, for this opportunity to testify before the Committee on Rules regarding the on-line captioning of Senate proceedings. As Chairman of the Subcommittee on the Handicapped, and as the brother to a deaf sibling, this subject is of very special importance to me.

There are approximately 22 million Americans who experience partial or total loss of hearing and who stand to benefit from captioned proceedings. Of that number, 2 million are totally deaf; the other 20 million have disabling hearing conditions. As Americans live longer, the number of people having hearing impairments will increase. This hearing represents acknowledgment by the Senate of the importance of participation of these 22 million deaf and hard of hearing persons in our government.

It is clear to me that our constituents are benefiting from the televising of Senate proceedings. But for deaf and hard-of-hearing constituents, the business of the Senate needlessly remains a mystery. Given the general availability of closed-captioning technology—real time or instantaneous captioning has been possible since 1982—and the support that the Senate has demonstrated for captioning through increased funding for media services, captioned films and technology development projects, it seems appropriate that we turn now to our own operations and caption Senate proceedings.

My brother Frank has been deaf since he was ten years old. Now he's 65 and until just a few years ago he had never listened to television. But when decoders became available, I bought him one and we set it up in his living room. . . . Sometimes when I call Frank, he'll ask me about my work, he'll tell me he saw me on T.V. and ask me what I was doing. Well he shouldn't have to ask. . . .

We have decided that it is important that we be accountable to our constituents and that they have the opportunity to partake in the legislative process via television. It is no less important, Mr. Chairman, that deaf and hard of hearing Americans be afforded that same opportunity.

Since I first wrote you concerning the possibility of captioning Senate proceedings, the Rules Committee has held several on-line demonstrations. I was disappointed not to have been able to attend the first of those demonstrations last year. At the time, the Senate was involved in extended debate on Central America and I was leading a discussion on the floor. Coincidentally, I actually became the subject of that first live captioning demonstration. I appeared on a large screen in a hearing room in the Dirksen Building and words I spoke fed out simultaneously across the bottom of the screen. My aide reported the results. She said that the demonstration had been a success and that if those stenographers could keep up with names like Enrique (the Cuckoo) Sanchez, Ricardo (Chino) Lau, Justician (Tino) Parez, Mario Sandoval Alarcon, and Roberto D'Aubuisson, they ought to have no trouble with the everyday debate of the Senate.

These demonstrations have proven that we have the technological capacity within our reach to caption Senate proceedings live, and it is up the Rules Committee now to determine a means. I have heard much debate on the advantages of both buying the captioning equipment and contracting for the service, and have no comment today on the best route. That I believe it is up to the members of this Committee and I am confident that with the good advice of its special task force on captioning, an appropriate decision will be made.

I am here today first to thank the Committee for its good efforts thus far, and to simply encourage members to push forward with this project. As a matter of equity, I believe we have an obligation where feasible to expand access to federal programs and officials for individuals with disabilities. In this respect, the Senate should serve as a model—we should send the message to the public and to the networks that to us, captioning is routine. Thank you, Mr. Chairman, for allowing me to address the Committee.

The CHAIRMAN. Thank you very much, Senator.

One of the things I find interesting in this procedure is that there is competition now for captioning. There is not just a single source. We have many people who are interested. We are very hopeful that with the added interest by the vendors we might be able to do what you are asking us to do and see the improvement and be cost effective. I think this procedure has been very important today.

I do thank you. We have been joined by the distinguished ranking member, Senator Stevens, this morning. If he has an opening statement or he would like to comment to Senator Harkin, I would be delighted if he did.

Senator STEVENS. Thank you, Mr. Chairman. I was struck in rain-oriented traffic, and thus late. I would ask that my statement be put in the record.

The CHAIRMAN. It will be included in the record in total.

[The prepared statement of Senator Stevens follows:]

OPENING STATEMENT OF HON. TED STEVENS, A U.S. SENATOR FROM THE STATE OF ALASKA

The questions we are hoping will be answered today deal with whether or not the Senate should enlarge its viewing audience to include the hearing impaired by captioning television broadcast of Senate floor procedures, and how best to do that if we believe we should. There is no question in my mind that the answer to the first question is yes, the Senate should caption its televised floor proceedings. Captioned television has been helping to bring the outside world to the hearing impaired since 1973. In addition to helping the hearing impaired, captioning has been used extensively to teach reading to people who have exceptional emotional problems and has proven to be a particularly valuable communication tool for people who use English as a second language. By captioning Senate proceedings, we open up a whole new world, and a very important world, to a large number of people throughout the Nation. We all respect the fact that knowing the legislative process is not just something one ought to know but it is required if one wants to be an informed and responsible American. Thus, we need to expand the audience of the legislative process so that all, no matter what communcation difficulties they may have, are able to see and understand the legislative process in action.

The second question is not quite as easy to answer, that being which of the various techniques used for captioning is the best for the Senate to use. I am pleased that we have various vendors before us and I am anxious to learn more about the technology and the reliability of the various systems that we will be considering. Mr. Chairman, these hearings, I think, are an excellent idea to put on the record not only the need for captioning the Senate proceedings, but also to help us document for anyone who may wish to review the hearings which system would be most beneficial to the Senate, to the hearing impaired and other users of the captioned TV, and to the American taxpayer.

Senator STEVENS. I believe we should, from my point of view, realize that we are here to decide what type of system should be used, not whether we should take this step. I have been of the opinion the Committee has been ready to institute this type of service for some time. We have got some difficult problems to decide—which system to use and how to employ it. That may take some time.

Senator HARKIN. As I said, I am not an expert in that. That is something that you will have to decide. All I can say is from a personal standpoint, and also as Chairman of the Handicapped Subcommittee, whatever help and assistance I can give I will do whatever I can to help.

The CHAIRMAN. We thank the Senator very much.

Senator HARKIN. I really appreciate it.

The CHAIRMAN. You have been very helpful to us this morning. We appreciate your support.

Senator HARKIN. Thank you, Mr. Chairman.

The CHAIRMAN. The next witness will be Ms. Pat Johanson, staff director, Commission on Education of the Deaf, GSA Regional Office Building here in Washington.

TESTIMONY OF PAT JOHANSON, STAFF DIRECTOR, COMMISSION ON EDUCATION OF THE DEAF, WASHINGTON, DC

Ms. JOHANSON. Thank you. I appreciate being here.

The CHAIRMAN. Good morning. How are you this morning? You may proceed with your statement.

Ms. JOHANSON. I appreciate the remarks by Senator Harkin. He has been a very wonderful advocate for the deaf community around the country, and we are very grateful that he is the Chairman of the Subcommittee on the Handicapped.

I am pleased to be here today on behalf of Frank Bowe, who is the Chairman of the Commission on the Education of the Deaf. He is not able to be here today but asked that I attend in his stead.

The Commission was established last year under the Education of the Deaf Act, which asked the Commission to make a study of the quality of education of deaf people in America and to make recommendations to Congress and the President for its improvement. Its report will be submitted in a few months, on February 4, 1988.

The Commission was given a broad range of topics to address. Among these was the degree to which the purposes of Part F of the Education of the Handicapped Act relating to educational media were being carried out. This section addresses educational media, which includes captioning services.

Captioning of television is of considerable interest to the Commission. During a recent meeting, the Commission recognized benefits that have come to the deaf community because of captioning, including greater knowledge and understanding of current events to the captioned news that Senator Harkin mentioned, strengthened reading skills and the pure pleasure of enjoying television entertainment. But all these benefits, there have been some disadvantages, too. One of these is that deaf people now can understand commercials on TV.

Televising of the House and now the Senate debates has helped many people become more familiar with the country's legislative processes, as well as giving them the opportunity to observe and evaluate their own representatives. Deaf people have been excluded from this opportunity. Until I came to the Senate to work here last year, legislation and politics were a mystery to me. I had to come here to learn how our country's political system works. Captioning of the Senate would permit many other people who are deaf that same learning experience.

This was exemplified recently when portions of the contra hearings were captioned. A great many deaf people watched the contra hearings, and I could not go to any deaf gathering without hearing deaf people talk about what had been said during the hearing that day.

The Commission supports the expansion of captioning and developed a Draft Recommendation during its August meeting that the Congress caption its own proceedings. The Commission believes that access to broadcasting of governmental proceedings, including congressional proceedings, is a right of persons who are deaf. Eighteen draft recommendations on a number of topics were developed for publication in the Federal Register. One of these was that, "The broadcasting of Government proceedings, including House and Senate floor activity, be captioned." On this note, the Commission requested that any interested parties submit comments.

The Commission was very pleased to hear after we had developed these draft recommendations that the Senate was already proceeding in its effort to bring captioning of floor debates and commends the Senate for these efforts.

To date, we have received 200 responses to the Notice of Draft Recommendations. Many of these respondents expressed support of the package of draft recommendations as a whole, and others of-

fered specific comments on the draft recommendation relating to captioning of the Congress. Let me share some of them with you.

One respondent from Illinois said that captioning should be mandatory, and that it would be particularly helpful in teaching deaf students about the political processes.

The organization Self Help for the Hard of Hearing said, "All citizens of the United States should be informed of the proceedings of their Government. Closed captioning of the televised debates is one method of making this communicatively accessible for those persons with hearing losses."

The National Association of the Deaf said, "We fully support this recommendation."

From the American Society for Deaf Children, we heard that this recommendation "will make a significant difference in the lives of deaf people, if they are made policy. These recommendations on captioning are appropriate and essential and welcomed."

The National Captioning Institute, represented here today by its president, John Ball, said that "captioning Government proceedings would demonstrate the Government's interest that all deaf citizens witness the debate of issues by their elected representatives and by Government officials. Additionally, such support provides an example to others on the degree of importance in making captioned television accessible for deaf people and others who would benefit from its availability."

Gallaudet University, represented today by Dr. Robert Davila, likewise expressed support of the Commission's recognition of the importance of captioning to deaf people. The Gallaudet University Alumni Association Board stated that it is in full agreement with any recommendation that promotes closed captioning for deaf persons.

The Resource Center for Independent Living in New York said, "Our legislative bodies should take the lead. We are theoretically a Government of, by and for the people."

Another, from Louisiana, responded in one word: "AMEN."

The Commission repeats that final thought. Thank you.

[The prepared statement of Ms. Johanson follows:]

PREPARED STATEMENT OF PAT JOHANSON,
STAFF DIRECTOR OF THE COMMISSION ON EDUCATION OF THE DEAF

I am pleased to be here today on behalf of Frank G. Bowe, Chairperson of the Commission on Education of the Deaf. Dr. Bowe is unable to attend, and has asked that I attend in his stead.

The Commission on Education of the Deaf was established last year under the Education of the Deaf Act of 1986, which directed the Commission to make a study of the quality of education of deaf persons in America and to make recommendations to Congress and the President for its improvement. Its report will be submitted February 4, 1988.

The Commission was given a broad range of topics to address. Among these was the degree to which the purposes of Part F of the Education of the Handicapped Act were being addressed. This section addresses educational media, including captioning services.

Captioning of television is of considerable interest to the Commission. During a recent meeting, the Commission recognized benefits that have come to the deaf community because of captioning, including greater knowledge and understanding of current events through captioned news, strengthened reading skills, and the simple pleasure of having access to television entertainment.

Televising of the House and now the Senate debates has helped many people to become more familiar with this country's legislative processes, as well as giving them the opportunity to observe and evaluate their own representatives. Deaf people have been excluded from this opportunity. Until I came here to the Senate to work last year, legislation and politics were a total mystery to me. I had to come here to learn how our country's political system works. Captioning of the Senate debates would permit many other persons who are deaf that same learning experience. This was exemplified when portions of the recent Contra hearings were captioned and a great many deaf people, with the rest of the nation, "listened" to the hearings. I could not go to any "deaf" gatherings without seeing deaf persons talk of what had been said at the hearings that day.

The Commission supports the expansion of captioning, and developed a draft recommendation during its August meeting that the Congress caption its proceedings. The Commission believes that access to broadcasting of governmental proceedings, including Congressional proceedings, is a right of persons who are deaf. Eighteen draft recommendations on a number of topics were developed for publication in the Federal Register. One of these was that "the broadcasting of government proceedings, including House and Senate floor activity, be captioned." In this Notice, the Commission requested all interested parties to submit comments.

The Commission was very pleased to hear after it had

published this draft recommendation that the Senate was engaged in an ongoing effort to begin captioning of its proceedings, and commends the Senate for this.

To date 200 responses have been received. Many respondents expressed support of the package of 18 draft recommendations as a whole, and some made specific comments on the draft recommendation regarding captioning of Congressional proceedings. Let me share some of them with you.

A respondent from Illinois said captioning should be mandatory, and that it would be particularly helpful in teaching deaf students about political processes.

The organization, Self Help for Hard of Hearing People said: "All citizens of the United States should be informed of the proceedings of their government. Closed captioning of the televised debates is one method of making this communicatively accessible for those persons with hearing losses."

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From the American Society for Deaf Children, we heard that this recommendation "will make a significant difference in the lives of deaf people, if they are made policy. These recommendations (on captioning) are appropriate and essential and welcomed."

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The Gallaudet University Alumni Association Board stated that it is in full agreement with any recommendation that promotes closed captioning for deaf persons.

The Resource Center for Independent Living in New York said "Our legislative bodies should take the lead. We are theoretically a government of, by and for the people."

Another, from Louisiana said simply, "AMEN."

The Commission echoes that final thought. Thank you very much.

The CHAIRMAN. Thank you very much, Pat.

In your statement, you noted that the Commission recommended captioning, and I quote, "Government proceedings, including House and Senate floor activities."

Ms. JOHANSON. Yes.

The CHAIRMAN. What other Government proceedings do you have in mind?

Ms. JOHANSON. The Commission discussed the possibility of, for example, governmental training seminars which are videotaped, other things of that nature, training films, videotapes that are developed for Government employees. Those could be included. Also included would be other congressional meetings of interest to the public. For example, the contra hearings were broadcast nationwide. Some of the networks captioned those; some did not. We would like to see all of those, anything that is broadcast on TV be captioned.

The CHAIRMAN. You mentioned you enjoyed watching captioned programs such as "Night Line" and "Moonlighting." How many other television programs are currently being captioned?

Ms. JOHANSON. John Ball of NCI is probably better able to answer that question. But I understand there are over a hundred hours of captioning offered now. Most of them are offered by ABC. The other networks have not done as much as ABC in terms of captioning their prime time programs.

The CHAIRMAN. What other companies are pushing the decoders or captioning devices other than Sears?

Ms. JOHANSON. I note there are a number of smaller companies that do sell them, too. For example, the National Institute for the Deaf sells them; various other organizations also sell them, too, entertainment dealers. But I think NCI can answer that better.

The CHAIRMAN. I was very interested in working with a gentleman by the name of Phil Knox, vice president of Sears, when they entered into this program of making the captioning devices available through their company. It was a significant event, I think, for those who are deaf.

Ms. JOHANSON. It was.

The CHAIRMAN. Senator Stevens.

Senator STEVENS. Which is most effective as far as deaf people are concerned—signing or captioning?

Ms. JOHANSON. To my understanding, captioning is preferred by most deaf people. I personally prefer captioning to interpreting.

For example, the problem with interpreting on television, for example, is that it can be very difficult to see the interpreter. Normally, in the past there has been some of that done where they have an interpreter inserted into the corner of the television screen. It was very small and very hard to see. There are variations across the country in the way some things may be signed. So some signs that are used in the East may not be used in the West. There could be difficulty in that area, too.

Senator STEVENS. Thank you very much.

The CHAIRMAN. You have been a very good witness, and we do thank you for being here this morning and giving us your personal testimony.

Ms. JOHANSON. Thank you.

The CHAIRMAN. Thank you.

The next witness will be Dr. Edwin W. Martin, President of the Human Resources Center in Albertson, New York. Dr. Martin.

TESTIMONY OF EDWIN W. MARTIN, Ph.D., PRESIDENT, HUMAN RESOURCES CENTER, THE NATIONAL CENTER ON EMPLOYMENT AND DISABILITY, ALBERTSON, NEW YORK.

Dr. MARTIN. Thank you, Mr. Chairman.

Chairman Ford, Senator Stevens, members of the Committee, I am Edwin W. Martin, President and Chief Executive Officer of the Human Resources Center, which is the National Center on Employment and Disability. We have a 35-year history in designing innovative, educational, vocational rehabilitation and employment programs for persons with disabilities. Our primary thrust is to help people with disabilities find jobs in the competitive workplace.

I really want to congratulate you, Mr. Chairman and members of this Committee, on taking this initiative. It is of tremendous importance to citizens of the United States who are deaf, to have a chance to participate as fully as possible in our national life; and the step that you are considering now is a major step forward in what has been, really, a 30-year history of steps in this direction.

Just about 30 years in one of the first pieces of education legislation approved by the Senate since 1865, the Congress agreed to allow the Executive branch to accept a small library of recreational films for deaf persons and to circulate that library in captioned format. That was signed, I think, in 1958. Since that time, there has been gradual progress in trying to help deaf persons participate fully in the nation's educational and cultural life.

Through this testimony, I would like to present three basic points: first, a brief history of the Federal role in captioning; second, I would like to urge you to televise at least part of the floor debate each week and key hearings; and, third, I would like to suggest that you consider working with the National Captioning Institute for those purposes.

I have had the privilege of working almost 20 years in some small way on this process. In 1966, I served as Director of the House of Representatives' Ad Hoc Subcommittee on the Handicapped. We organized hearings which led, in part, to the first Education of the Handicapped Act and to the expansion of the captioned films program. I worked closely at that time with Senator Hill and Senator Morse and their staffs in expanding that program.

Later, as Director of the Bureau of Education for the Handicapped and as Assistant Secretary for Special Education and Rehabilitation Services, we worked with you and with the Labor and Human Resources Committee and Senator Stevens and his colleagues on the Appropriations Committee to fund a number of programs, including the effort to begin captioned television.

Since the early 1970's, I had been working on an experimental basis with organizations for the deaf and others through my post with the Federal Bureau of Education for the Handicapped to caption films and in attempting to caption television on an experimental basis.

President Carter asked Secretary Califano and me to make an effort to secure captioned television on the commercial networks. He had spoken to a woman from the Department of Agriculture who was deaf, as he went around from department to department shortly after his inauguration speaking to the employees and getting their ideas. This woman asked him if he would help bring about the captioning of network television. He thought it was an interesting idea and timely and spoke with the Secretary, and in turn I was given the assignment to see if we could bring that about.

Deaf people have been subjected to considerable isolation, as Senator Harkin mentioned, and they have had in many instances—and this is still true on the average—the opportunity for less schooling and less employment. Without movies, without television, without theater, the deaf lived in the mid-Sixties in a relatively unstimulating world from that point of view.

Secondly, we were interested not just in expanding the cultural opportunities for persons who are deaf, but there was a great deal of experience based on our work with captioned films that this would bring new information and improve reading skills. This was particularly critical for young deaf children because the problems in learning language without hearing frequently resulted in persons who were deaf having less than average levels of reading ability and a long struggle to overcome that disability. What we have discovered is that through the captioning of television and films, reading skills are enhanced.

Briefly, and I will spare you the details, it was a long and complicated process to get the networks involved in this. The reason for that was that, at first, none of the networks were interested. They felt it was probably impractical; it was costly; they were not sure that there were enough deaf persons in the potential audience to justify it. Secondly, the producers would have had to agree, all the relevant unions, including the screenwriters and everyone else would have to agree, and nobody was making decoders. Nobody was making the electronic chips that were necessary for decoders. There were problems at each step, from manufacturing through sales and repairs to broadcasting. We in the Office of Education had sponsored some pilot work with the Public Broadcasting System on open captioning so that everyone could see the subtitles. When they did audience reaction polls, they disclosed that a substantial number of people did not want the open captioning. They thought it was distracting. The networks and PBS itself were very uninterested in putting anything out that they thought would drive viewers away. So it was necessary to design a completely new system that would be invisible to most persons and yet could be available to deaf persons and to do that somehow in an economically feasible way.

The Public Broadcasting System and ABC really deserve the lion's share of the credit for this. They were the only people who encouraged me, and who agreed to work with us. John Ball, who was then the chief engineer of PBS and who is now the Director of the National Captioning Institute, and Julius Barnathon, who is now the President of ABC's Engineering and Operations, sat down

with us and we worked out a plan which we then brought to the Congress and to the Executive branch for consideration.

Today, all three networks are providing commercial programming in addition to PBS. There are also cable systems offering captioned programming, and you can buy videotapes that are captioned for home use as well. The National Captioning Institute, which is a non-profit agency which was created specifically at the request, really, of the networks and by the Federal Government and PBS has also expanded their technology and made it available in Canada. So the Canadian Broadcasting System now makes programming available to deaf persons in the northern parts of the United States as well as in Canada.

The children and adults who are deaf are, as you have heard already, extremely enthusiastic about this service. It has made a great difference in their lives. As one index of that, deaf people contribute more than $100,000 a year to a special fund operated by the National Captioning Institute to add additional programming. That is called the Captioning Club.

I do wear two hats here today: one as the former Government official who was involved in the origins of captioning and the development of this program; and, second, I serve as a board member, having joined a few years ago, the non-profit National Captioning Institute board.

A major concern expressed by the networks was that we find a reliable source of low-cost captioning. They were particularly concerned about that because they were afraid that they would introduce this service, that deaf people would become interested in it and appreciative of it, and then if the captioning was unreliable or if they were at the mercy of a vendor who would suddenly inflate the prices, they would either have to pay those prices or drop the service. And they were vulnerable, particularly since we were asking them to make a major contribution of their own money to be involved in this.

As a matter of fact, ABC started with a half-million-dollar-a-year contribution for paying for captioning of its programs. It now spends about a million dollars a year, either purchasing captioning or supporting the activity within the network. So we were looking for something more than a symbolic contribution on the part of these networks.

The networks wanted an independent, broadcast-sophisticated, nonprofit agency, and we set out to see whether we could do that with colleges or universities, and whether we could do that with existing public stations. As we negotiated with the networks, it was decided that the best solution would be to set up a special agency that would be broadcast-sophisticated and that would have no other commitment than doing this kind of work. This agency would be there and the Government could depend on it as a supplier of services, and the networks could depend on it as well.

There was another issue that became paramount, and that was the hardware itself. As I mentioned, nobody was making this, and we had to involve the private sector in helping us with this through PBS and through some consultants. We contacted every major manufacturer of television sets in the United States and Japan in order to try to find someone who would make a decoder

for us. We worked with all the people who manufactured the chips, using PBS to find someone who could design one. Eventually, we did work out an arrangement with the Texas Instruments people to make a chip and with Sears to include it in their sets and with Sanyo through Sears to build the decoders.

Again, in order to try and keep the price low, we had to try and convince each of these companies to sell the decoder to us at the lowest possible cost and to use less than an ordinary markup. Sears and other companies did join us on that basis.

There is currently no agency in the Government that takes responsibility for the design and manufacture of decoders. There is no private company that is designing and manufacturing decoders on their own. The linkage between those two systems, between our appropriations through the Department of Education and the ultimate product, is through the National Captioning Institute. The development and distribution of hardware is a role that emerged. We were not sure originally that there needed to be a special agency role, but it turned out that the market forces are not strong enough to drive the sale and development of decoders without the help of some subsidy, which the Senate and the House have provided in recent years, to lower the costs for deaf persons, and without some agency to make a planning and management contribution of its own to this activity. So those things become important, I think, for your consideration.

I came to Washington, Mr. Chairman, at a time when people with disabilities in the United States were being denied basic rights. I heard parents cry in a hearing room like this across the Capitol in the Rayburn Building because their children were being turned away from local schools.

I remember vividly when an earthquake shook California and when deaf persons had no way of knowing what emergency instructions to follow. The radio was useless to them. There were no visible announcements on television. They could not wait until the next day's newspapers to read and find out what they were supposed to do. It was, I think, a graphic example of where citizens of Los Angeles would have been if, a few weeks ago, they had not had any way of getting the information they needed to respond to that emergency.

Today, because of your efforts, and efforts of colleagues in Congress, that is not true. The Education of All Handicapped Children Act now promises all children with disabilities a free and appropriate public education. The evening news on ABC is captioned each night, sent out live. The President, when he makes a major address, is covered by live-time captioning so that people who are deaf can view that instantly.

The next important step, I think, is to have Senate proceedings and Senate hearings, where appropriate, available as a part of this major mission.

I hope that you will consider using the National Captioning Institute, working with them to have this happen, because as I have mentioned before, the agency was created specifically to try to tie together the loose pieces in this system. And without such an agency, the system would fail. It is not yet a system which can be driven from either the hardware point of view or from the pro-

gramming point of view without a central focus and government assistance. No one else has stepped forward. That is not to say that there is not a good to be had from competition because there is. That is how our system works and it is very good, but at the same time, in setting up this agency, we knew that it was going to be critical for the Government to make use of it and for it to be their prime technical assistance provider if we were going to have a system which the networks could depend on and which could succeed.

I want to thank you very much for this opportunity, Mr. Chairman. I feel a tremendous amount of pride that I live in a country like this where the Senate Rules Committee would take the time to be concerned about a small minority of people with deafness. We have a record before you today where public officials and private companies have a value system which is so attuned to the individual rights of individuals that captioned television is more than a fantasy. Without that kind of a value system, without your interest here in the Congress, and without the growing awareness in the United States of people with disabilities, I think that we would never be able to do an activity as beneficial as captioning, and we would not have the kind of national commitment to including disabled people in our lives.

I think that this leadership has come primarily from the Congress, and you deserve a great deal of credit for the sensitivity on behalf of individuals with disabilities that has grown in this country over the last two decades.

Thank you.

[The prepared statement of Dr. Martin follows:]

PREPARED STATEMENT OF HON. EDWIN W. MARTIN, PH.D.
PRESIDENT, HUMAN RESOURCES CENTER
NATIONAL CENTER ON EMPLOYMENT AND DISABILITY

Chairman Ford, Members of the Committee, I am Edwin W. Martin President and Chief Executive Officer of the Human Resources Center, the National Center on Employment and Disability. The Center, housed in Long Island, New York, has a 35 year history of developing innovative educational and rehabilitation programs designed to help people with disabilities secure employment in the competitive sector.

I am very pleased to have the opportunity to testify before this Committee and to applaud your interest in determining the feasibility of providing captioned television of Senate Floor debate so that persons who are deaf and hard of hearing may gain the unique insight into national policy that televised proceedings provide and which is not available through the print media.

Through this testimony I would like to present three points. First, a brief history of the federal role in captioning television, to provide a perspective for your decision. Second, I would like to urge you to televise at least part of the floor debate each week and also key hearings, such as the recent hearings on Iran and on Judge Bork. Third, I would like to suggest that the Committee use the National Captioning Institute to achieve its purposes.

I have been interested and involved to some degree in the process of providing captioned films and television to persons who are deaf for more than 20 years. In 1966, as Director of the House of Representatives' Ad Hoc Subcommittee on the Handicapped, I helped organize hearings which, in conjunction with Senate hearings, led to the expansion of the federal Captioned Films Program to authorize the captioning of television and educational films as well as the recreational films which had earlier been available. Later, as Director of the Bureau of Education of the Handicapped from 1969 to 1979 and as Assistant Secretary for Special Education and Rehabilitative Services in the new Department of Education, we worked with Congress to expand this program to include the development of technology for persons with other disabilities, and also funded a number of model programs designed to demonstrate the feasibility of providing captioned television and to implement the current services.

President Carter asked Secretary Joseph Califano and me to try to secure the participation of the commercial networks in providing captioned television. He had been asked by deaf persons he had met shortly after becoming President if he could help. We responded enthusiastically to the assignment for two reasons. 1. Deaf people have been subjected to considerable isolation from society because of their disability and because of society's handicapping attitudes. Deaf people have had less

opportunity for schooling and for employment and for recreation. Without specially modified movies, television and theatre, the deaf lived in a relatively unstimulating world. 2. There was a great deal of evidence based on our experience with captioned films that captioned materials would not only bring new information and entertainment, but would improve reading skills, which are hampered by the person's reduced ability to hear and learn language.

Briefly, it was a long and highly complicated task, involving securing network cooperation--none was willing at first, cooperation of producers and relevant unions, identifying manufacturers of electronic chips and components, developing encoders and decoders that would not interfere with picture quality, locating companies to sell and service the decoders that would be necessary in each home to convert an electronic signal into a caption that would not be seen by others, and--not the least, securing public and private financing.

The Public Broadcasting System and the American Broadcasting Company deserve the major credit for working with us to overcome all these problems. The chief engineer of PBS, John Ball, and the President of Engineering and Operations for ABC, Julius Barnathon laid out a plan which eventually succeeded. As Assistant Secretary I had the pleasure of working with the Congress to provide the legislative authority and appropriations to make the program work. Congress, including many members of this Committee who serve on the Committees on Labor and Human Resources and the Appropriations Committee, demonstrated great interest and compassion in supporting these efforts.

Today, all three commercial networks are providing programming in addition to PBS. In addition, captioned programming is available over cable systems and on tapes available for home VCRs. The technology developed in the United States by the National Captioning Institute, a non-profit agency, created to make possible the network participation I mentioned earlier, has also helped the Canadian Broadcast Company provide captioned programming in that nation. Children and adults who are deaf are enthusiastically grateful for the access to television, even contributing more than $100,000 annually to the National Captioning Institute's Captioning Club to pay for additional programming.

I would like to discuss the National Captioning Institute, because I think the Committee should give very careful consideration to allowing NCI to work with the Senate in developing captioned proceedings. I wear two hats in talking about NCI, one as a former government official who understands why NCI had to be created, and two, I agreed to serve on the Board of the Institute a few years ago.

When ABC laid out for us the obstacles they saw preventing commercial captioned programming, and made suggestions for how they might be overcome, a major concern was for a reliable source of high-quality captions with as low a cost as possible. As we examined that problem with ABC and other networks it became apparent that an independent, broadcast-sophisticated, non-profit agency with a primary commitment to serving persons who are deaf was required. Such an agency could be counted on to produce a quality product, in close conjunction with consumers who were deaf, and be a reliable supplier. The networks feared that another type supplier might let them down, charge them exorbitant prices after the programming had begun, and in general disappoint persons who were deaf, who, in turn, would hold the networks responsible. I might add here, that not only were we, as the government, asking the networks to allow their programming to be captioned and to modify their equipment, but also to pay a significant sum. ABC began their cooperation by providing $500,000 annually to caption its programs, supporting an effort that was totally experimental where a commitment had to be made before one deaf person had a decoder.

Working with PBS, the National Captioning Institute was created, and designed to be a public and privately supported agency that could meet ABC's and the other networks' concerns. It soon became clear that some agency was also going to have to play the key role in designing and supporting the development of the hardware since no commercial company felt the project would be sufficiently profitable to make such a venture investment. NCI has played that role, assisted by federal and private funds, and Sears agreed to play a role, motivated a great deal by public service, in manufacturing and sales and repair of decoders at less than normal profits and with no exclusive right to sale. Other retailers have since joined in marketing efforts. Congress has approved a subsidy program and decoders are now available to deaf persons for about $200, and hopefully prices will continue to decline. I might add here that the technology for doing "live-time" captioning which would by used by the Senate was first utilized by NCI to do the ABC Evening News.

I have spoken to President Carter and to Secretary Califano in recent years and each has expressed the pleasure he takes in seeing this very small program, as government programs go, become successful in helping bring persons who are deaf into the mainstream of American life.

Your interest in making the proceedings of the Senate available to American citizens who can not hear, has both real and symbolic importance. I came to Washington at a time when millions of children were denied an opportunity for an education because they were unfortunate enough to have a disability. In those first hearings in the House I heard parents weep as they

told of being turned away from their local schools and being left without any recourse. I remember vividly when an earthquake shook California and deaf people had no way of knowing what emergency steps to take. Radio and television were useless. Waiting for tomorrow's paper was useless. Today, because of your efforts and those of your colleagues in Congress these stories are past history. The Education for All Handicapped Children's Act assured children of a free, appropriate public education, and captioned television means that technology is widely available for emergency messages. The ABC Evening News is sent out live in captioned format each night. When the President is inaugurated persons who are deaf can watch and be informed, and an important next step will be to have Senate proceedings available.

I hope that you will use the National Captioning Institute to make this happen. Without this agency the entire captioned programming effort would fail in short time. No economically independent source of technology has emerged to supply decoders, design new systems, and without decoders in homes no broadcaster, including the Senate, is interested. NCI has no other mission and its non-profit status assures reasonable costs. Like any business the more volume it has the more economical it can become and it is on that basis that I hope the Committee will provide assistance which enhances this national program.

Mr. Chairman, Members of the Committee, thank you for this opportunity. What pride I feel that I live in a country where this hearing can take place--where the information needs of deaf people, a small minority of our nation, could command the attention of the Senate Rules Committee! Where public officials and private companies and individuals would have a value system so attuned to individual rights that captioned television could be more than a fantasy, and where our belief in the intrinsic worth of each person makes us want to fully include persons who are deaf or who have other disabilities, in our national life.

I would be happy to answer any questions if I may be of help.

The CHAIRMAN. Thank you, Dr. Martin. We find ourselves in the position where we are going to have a vote. I think Senator Stevens and I will question you, and then we have a panel of four.

Excuse me, Jake. Do you have a statement that you would like to make?

Senator GARN. No, Mr. Chairman.

The CHAIRMAN. Dr. Martin, when you were Assistant Secretary of Education, you headed a program for encouraging corporations to support captioning. How did you convince them it was in their best interest to do that?

Dr. MARTIN. The private sector?

The CHAIRMAN. Yes.

Dr. MARTIN. I think probably it was more a question of a public service than a profit motive. I think we were fortunate enough to find that there was some balance between economics—there was a growing awareness that people with disabilities in the United States—people who were deaf, people with hearing impairment—are gainfully employed people. They are part of an emerging population, once ignored, now working citizens. Sponsors and others were interested in reaching out to this population. But, in most part—and this was clearly true with ABC and it has been clearly true with Sears and others—there was a public service motivation.

I do not think the project would have existed, as I mentioned to you, I do not think it would have existed on economic viability alone. I think it was an intersection where the government and the private sector saw that this was a good service, an important service. It brought about the kind of a country we want to live in, and they did it on that basis primarily.

I do not think it has made any money, I can tell you that.

The CHAIRMAN. I understand decoders cost roughly, what, $200?

Dr. MARTIN. Yes, they do. They cost about $200 at this time. They have gone down in price from the first generation of decoders which was developed by NCI with Sears and Sanyo, and now we have a second generation of decoders. The Congress is providing about a $35-a-person subsidy for up to 50,000 of those decoders, which allows the price to be under $200 at this time.

The CHAIRMAN. Of course, a deaf individual will have a problem if they have a satellite dish. In order to receive television programs, they have to have a decoder on the dish, and then they have to have a decoder on their set, too. So there is a double whammy, as I see it.

Dr. MARTIN. I am not sure about that. Mr. Ball, who is an engineer and will testify later, can tell you about it.

My understanding is one decoder is what would be necessary.

The CHAIRMAN. The scrambler, I guess, is what I am referring to.

Dr. MARTIN. They would need that to see basic programming.

The CHAIRMAN. Right. And then they would have to have that.

Dr. MARTIN. Yes.

The CHAIRMAN. Is there any effort under way to provide people with decoders who cannot afford them?

Dr. MARTIN. Yes, there are a number of them. In fact, a project was announced in Washington this week between the Captioning Institute and a private company to make decoders available to

older people. This effort will involve more than $100,000 to that end.

In addition, there are various other organizations, charitable organizations around the country, civic clubs and others, that are working to make decoders available to children of low income. And through the Captioning Institute, we have a business advisory committee, a corporate advisory committee including some of the major companies in the United States, and they are taking on that mission specifically to bring private funds into making decoders available either free or at very low cost to low income people.

It is a very important step forward, Senator.

The CHAIRMAN. I have no further questions.

Senator Stevens.

Senator STEVENS. What role did the Institute play with regard to the selection of hardware by entities such as ABC?

Dr. MARTIN. In fact, what happened was the hardware had to be designed specifically. At that time, the Public Broadcasting System engineers, the emerging National Captioning Institute and ABC talked about how to bring that about in ways that would not degrade the signal. That was one of the things the networks were very concerned about. If they put these captions on, will their signals get noisy and will people see various things? And, furthermore, will the deaf get a good signal?

So the decoder, the first decoder and the most recent decoders were designed by the institute in cooperation with ABC and at the first stage with PBS.

Senator STEVENS. Does the Institute play any role now in selecting the type of equipment that the Congress will need?

Dr. MARTIN. Yes. In fact, it is really the only organization that is in that business at all. In the development of the basic encoding equipment which encodes the captions and then the decoder is involved after that. They have worked with other private sector companies, for example, in the development of live-time capability.

Senator STEVENS. I am trying to get to our problem here.

Dr. MARTIN. Oh, yes.

Senator STEVENS. I do not want to take too long.

Dr. MARTIN. Sorry, Senator. I may not have understood.

Senator STEVENS. In terms of the private sector people that are here now, what is the relationship between NCI and these providers that are offering us services?

Dr. MARTIN. It depends on what the providers are. For example, some that might be offering hardware technology have worked with NCI in the past; for example, on the live-time captioning. So at least one of the providers works with NCI on that particular technology that allows stenotypists to convert their messages into live captioning.

Others are providers that might offer captioning services which are an alternative to NCI in that way, in the actual captioning of the programming. So that you have, I think, if I read the witness list correctly, some cooperating companies and some competitors.

Senator STEVENS. I do not want to get too personal. Let me preface this with the fact that my father was blind, and I know from personal experience when I was a small boy, the impact of having a person with a disability in your own family.

What is the national need now for the decoders? How much of the need is unmet?

Dr. MARTIN. That is a very hard question. It is always harder to tell how many out there are uncounted than it is how many are counted. My own feeling is——

Senator STEVENS. Let me turn it around the other way, then. How much of the need has been met?

Dr. MARTIN. We have approximately 450,000 to 500,000 people watching through decoders now, through about 150,000 to 180,000 decoders that are in homes or in other group settings where deaf people are. My feeling is that that is about half or less of the ultimate market. And I think the factors that make that true are two things: one, that the cost of the decoders have yet to become low enough to where they are easily obtainable; and, second, that as the programming has begun to grow in recent years, it is more attractive to deaf people to have this.

We see continued sales every month of decoders. There is a market there, and we are exploring through Government efforts—the Government has just put out a contract to help develop more sophisticated marketing. The organizations of the deaf, I think, who will speak with you, will tell you that they think there are many persons who are deaf who do not yet have this service and who will have it someday.

Senator STEVENS. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Garn.

Senator GARN. I have no questions, Mr. Chairman.

The CHAIRMAN. We are going to recess. Thank you, Dr. Martin.

Dr. MARTIN. Thank you, Senator.

The CHAIRMAN. We appreciate your valuable testimony this morning.

I am going to recess the Committee for about 15 minutes. That should give the members of the Committee time to vote and then come back. In case you want to know what the vote is, it is the Dole amendment to the War Powers Act.

Senator STEVENS. Mr. Chairman, I have a statement from Senator Warner who, as you know, is slightly disadvantaged himself right now. He would like to put his statement in the record so he does not have to come over here this morning.

The CHAIRMAN. Well, we ought to make him come, but his statement will be in the record.

[The prepared statement of Senator Warner follows:]

PREPARED STATEMENT OF HON. JOHN W. WARNER, A U.S. SENATOR FROM THE STATE OF VIRGINIA

Mr. Chairman, it is my pleasure to be participating in this hearing this morning, and I commend you and Senator Stevens for having this hearing.

I would like to welcome our witnesses this morning, particularly our colleague, the Senator from Iowa, Mr. Harkin, and the representatives from Gallaudet College and its alumni association.

I would also like to extend my welcome to the panel of witnesses who provide captioning services and equipment, and note with pleasure that at least two of those witnesses are from Virginia.

I am sure that that fact represents merely an oversight on the chairman's part!

Mr. Chairman, and distinguished witnesses, I approach this hearing very seriously, and look forward to learning a number of things.

First, I hope to have an accurate gauge of the level of interest for captioning the broadcast of the Senate.

I want to hear from outside these halls whether anyone is that interested that they would go to such effort to have our efforts captioned.

And next, I hope to have an accurate assessment of the most practical and efficient method of providing those services if indeed they are found to be desirable.

Again, thank you for coming.

I welcome the opportunity to meet with and hear from members of your community, and look forward to working with you and other hearing-impaired groups on this subject.

The CHAIRMAN. In case you do not know what happened to Senator Warner, he was presenting a trophy Sunday afternoon, when a six-year-old got into a gasoline driven golf cart and took Senator Warner with him. In the process, he broke his kneecap. So John now is somewhat slower than he was last week in getting from place to place.

We will stand in recess now for approximately 15 minutes, and we will be back as soon as we can.

[Brief recess.]

The CHAIRMAN. Well, we did not miss 15 minutes by too far. We are now going to call to the witness table a panel of two. Dr. Robert Davila and Mr. Jack Gannon. We are delighted to have both of you gentlemen here. We will begin with Dr. Robert Davila.

TESTIMONY OF PANEL CONSISTING OF DR. ROBERT DAVILA, VICE PRESIDENT FOR PRE-COLLEGE PROGRAMS, GALLAUDET UNIVERSITY, WASHINGTON, DC; AND MR. JACK GANNON, EXECUTIVE SECRETARY, GALLAUDET UNIVERSITY ALUMNI ASSOCIATION, SILVER SPRING, MD

Dr. DAVILA. Mr. Chairman, thank you for the opportunity to be here today to testify in support of the proposal to caption the televised Senate proceedings.

My name is Robert Davila. I am a vice president of Gallaudet University, and I have been deaf myself since I lost my hearing at the age of eight due to meningitis.

You have several distinguished people testifying today who can give you all the technical information you need about captioning. I would like to use my time today to talk to you about the impact of your decision on people like myself throughout the country.

This is a wonderful development that the United States Senate is considering captioning its floor proceedings. I can remember a time not too long ago when this amazing technology did not exist. Also still vivid in memory is a time when the special needs of the disabled attracted very little attention from those not directly affected. That I stand before you today in support of captioning television on the Senate floor is testimony to how far we as a society have come. Senator Kerry's excellent legislation on assistive devices and Senator Harkin's forward thinking hearings on the "technology promise" are further evidence of our increasing sensitivity to people with a physical difference.

Living here in Washington and serving in a leadership role at Gallaudet and with national organizations related to deafness, I have had the opportunity to be involved in the political process at the national level. I have been privileged to provide testimony before a number of House and Senate committees in the past. Even

today I can use my TDD special phone device to call Senate and House offices and speak to them directly by typing my message on a special phone device.

Yet I know that, although I had the opportunity to do that, very few other deaf people have the same opportunity to become involved in the political process beyond paying their taxes and voting.

Much of the information that people take for granted is not accessible to hearing impaired persons. For example, this morning, driving to the office, you may have picked up incidental information by listening to your car radio. This access is closed entirely to people with severe and profound hearing losses.

It all comes down to access—access to information that allows us to understand our political process and the working of our Government. Once we understand the political process, then we can become involved ourselves as citizens.

With the proposal you are to decide upon, you will be providing an opportunity for deaf people to have access just like everyone else who can hear.

My responsibilities at Gallaudet include the administrative responsibility for two national demonstration schools. Last week, I went to our social studies class at the high school on our campus and asked the students if they wanted to see the Senate floor proceedings captioned. As you can imagine, I got a very resounding "Yes!" from everyone in the class. The students had some definite ideas about this topic, and I would like to share some of their comments with you.

A student from Pennsylvania told me that captioning would help deaf people, both young and old, to learn more about our Government. He indicated it would be a wonderful tool for teaching government in schools, and added that reading the captions would even help him improve his English skills. He also said the benefits would not be limited to hearing impaired persons, but would also be beneficial to those hearing people for whom English is not their first language.

A West Virginia student told me that learning more about the Senate through captioned television would increase the chances of a deaf person being elected to the Senate. And she thinks that she herself might be that person.

When we talked about the cost of captioning, one student suggested that maybe the captions should be limited to "important" floor debates. But other students immediately disagreed with the idea because, they said, "What is important to you may not necessarily be the same thing that is important to me. So who will decide?"

While all the students in the class said they would be watching the proceedings, they also said and agreed that not every deaf person would be watching the proceedings, at least not all the time. But they also pointed out that not every hearing person watches, regardless of the fact that he can hear. One student argued that when every curb in this country was cut to permit access across the street for people who are in wheelchairs, it was done with full understanding that not every curb would be used every day.

I have to admit that I was also surprised and pleased at the level of enthusiasm the students showed for the idea. Several of them had their interest sparked in this proposal because of the experience of last summer when they watched the Iran-contra hearings that were captioned on television. Our young people today are ready and eager to be involved in every aspect of citizenship, and they see the captioning of the Senate floor proceedings as one more way to cultivate that interest and involvement.

Hearing impairment limits some of what the hearing people and myself can do. Exclusion from access to the mainstream of society is much more of a significant hindrance. Our hearing impaired citizens deserve access to the workings of the Government. And our country deserves the valuable contributions that will come when every member of our society is included in the entire political process.

I thank you, Mr. Chairman and members of the Committee, for this opportunity to come and testify before you. Thank you.

[The prepared statement of Dr. Davila follows:]

PREPARED STATEMENT OF
DR. ROBERT R. DAVILA, VICE PRESIDENT, GALLAUDET UNIVERSITY

Mr. Chairman, thank you for giving me the opportunity to testify today in support of the proposal to caption the televised Senate floor proceedings for the benefit of hearing impaired persons. My name is Robert R. Davila, I am a Vice President of Gallaudet University -- the only liberal arts university in the world for deaf people -- and I have been deaf myself since I lost my hearing at the age of eight due to meningitis.

You have several distinguished people testifying today who can give you all the technical information you need about captioning: the technology, how much it costs, how many people use it, and all the related data you will require in making your decision. I would like to use my time with you today to talk about the impact of your decision on me -- Bob Davila -- and people like me across the country.

On the one hand it is a wonderful development that the United States Senate is considering captioning its floor proceedings. I can remember a time not so long ago when this amazing technology simply did not exist. Also still vivid in memory is a time when the special needs of disabled people attracted very little attention from those not directly affected. That I stand before you today in support of captioning televised Senate floor proceedings is testimony to far how we as a society have come. Senator Kerry's excellent legislation on assistive devices and Senator Harkin's forward-thinking hearings on the "technology promise" give further evidence of our increasing sensitivity to people with a physical difference.

Living here in Washington and serving in a leadership role at Gallaudet and with national organizations related to deafness, I have had the opportunity to be involved in our political process at the national level. I have been honored to testify on a number of occasions before various subcommittees and committees in the House and here in the Senate; I have written letters to Congressmen and Senators in support of causes vital to the disabled; I have even been able to use my TDD phone device to call Senator Harkin's office directly and type my message to him over the phone lines. Staff people from the Hill meet with our organizations to keep us informed about issues of importance to us; our coalitions keep us posted about the good issues and the bad issues up here; Gallaudet is privileged to have House and Senate members on its Board of Trustees, such as our newest Board member, Senator Inouye, who can share valuable information with us.

Yet I know that, in this rich exposure to the workings of the government in our great nation, I am an extreme and rare exception. How many other hearing impaired individuals have even one opportunity to be involved personally in the political process that is of such importance to us all? Then answer, I am afraid, is precious few.

But the greatest misfortune is not that few other hearing impaired people have personal experience with the Federal Government beyond the paying of taxes and casting of votes. No, the worst offense is that people who do not hear normally are largely cut off from the common, almost constant sources of information about government that everyone else takes for granted.

How many of you in this room listened to some sort of news and information program while driving here this morning? We are said to be an information-centered society. Indeed, in recent months we have had graphic illustrations to demonstrate just how deep and intimate a knowledge of our candidates to national office our nation's citizens have begun to expect and demand. Yet the bulk of the information stored in our collective consciousness are not facts and figures we set out to learn. Much of what we know comes to us by way of less intentional channels.

Among hearing people I have noticed a tendency to do several things simultaneously. You read the newspaper while watching the evening news. You listen to McNeil-Lehrer with Time magazine in your hands. Those of us who do not hear normally can never do that. To follow even a captioned news program requires total attention. So much of what the public knows is simply OVERheard. Those of us with hearing impairment OVERhear nothing.

It all comes down to <u>access</u>. Access to information allows us to understand how our political process works and ultimately, to become involved in the process.

Let me share with you a little about that word "access." I define it a little differently than Mr. Webster does. To me, access is one of the most important words in the English language. It means being able to phone my wife, who is also deaf, to tell her I'll be late for dinner or to call my son, who is hearing, and ask him what time he'll pick me up for the weekend's football game. Those are things I couldn't do until Telecommunications Devices for the Deaf -- or TDD's -- became available. You had been picking up your phone twenty or thirty times a day long before I could use Alexander Grahan Bell's invention for anything more than a fancy paperweight. I used to drive thirty miles only to find that a friend was away simply because I could not call him.

Access means having my interpreter here sign your comments and questions so that I know what's going on in this hearing. Of

course, I have been known to instruct the interpreter to stop signing when things are not as interesting as I would like them, but I'm sure I won't have to do that today.

And access means being able to watch Ted Koppell on "Nightline," or the 11 o'clock news on Channel 7, or even a sitcom rerun if that's all my brain can take after a tough day at the office. I've been waiting years for "60 Minutes" to be captioned so I can find out why Mike Wallace strikes such terror in the hearts of people everywhere, and I just recently learned that there are plans to caption that program next year. One of the first evening soap operas to be captioned was "Dynasty," and it became an unwritten national rule among the deaf community that you didn't call anyone on Wednesday nights during the program. We had no idea you could get by with all that stuff on TV!

The point I'm making is that access is the key to full participation in our society. Not all deaf people watch the same captioned sitcoms, or attend theatrical performances that are interpreted in sign language, or use their TDDs to call Information. And not all deaf people will watch the captioned televised proceedings of the Senate. But it is important that the information is available to those people who want to use it. And it is important that deaf people have the opportunity to see what happens here in the Senate. Through seeing it, over and over on a regular basis, we will be able to gain a real understanding of this complex process of lawmaking that goes on here. And after that understanding is developed, we can finally start to become part of the process ourselves.

My responsibilities at Gallaudet include the administration of model elementary and secondary schools for deaf children. Last week I went into a Social Studies class at our Model Secondary School for the Deaf to ask the students if the Senate floor proceedings should be captioned. I can tell you that I got a resounding "Yes!" to my question. The students had some definite ideas about this topic, and I would like to share some of their comments with you.

A student from Pennsylvania said that the captioning would help deaf people -- old and young -- learn more about our government. He indicated that it would be a wonderful tool for teaching government in schools, and added that reading the captions would even help him improve his English skills. He said its benefits would not be limited to hearing impaired people, but would also help hearing people for whom English is a second language.

A West Virginia student added that learning more about the Senate through captioned TV would increase the chances of a deaf person being elected to the Senate in the future. And she thinks that first deaf Senator just might be her!

When we talked about the cost of captioning, one student suggested that maybe the captions should be limited to

"important" floor debates. But other students immediately vetoed his idea, because "what's important to you may not be the same as what's important to me, so who will decide?"

While all the students in the class said they would watch the captioned proceedings, they agreed that not all deaf people would be interested in watching, and certainly not all the time. But they also pointed out that not all hearing people watch the televised proceedings now, and that the numbers were not as important as the benefit to those who would watch. One other student argued that when every curb in the country was cut to accommodate wheel chair users, it was done with full understanding that not every curb would be used daily.

I have to admit I was a little surprised by the level of enthusiasm the students showed for this idea. Several of them had their interest sparked when they watched captioned Iran - Contra hearings on ABC over the summer, and they are clearly ready for more. Without using the word "access," the students described the concept clearly for me in their responses. Our young deaf people are ready and anxious to be involved in every aspect of citizenship in our country, and they see the captioning of Senate floor proceedings as one more way to cultivate that involvement.

Visitors to the Gallaudet campus unfailingly remark that, on Kendall Green, people converse in both speech and sign, as though everyone were deaf. It may seem strange initially, but hearing people talking among themselves recognize deaf people's right to be included -- our right to exist. Even when I am one deaf man among a hundred who can hear it is still my right. When I walk into a busy room and see the hearing people switch, as if by reflex, to speaking and signing so that I can understand, I am overjoyed. This is how it should be. Hearing impaired people deserve to be included. When we are included, our disability is no longer a handicap.

Hearing impairment limits some of what we can do. Exclusion from access to the mainstream of society is a much more significant hindrance. Our hearing impaired people deserve access to the workings of government so compellingly played out here day after day. And our country deserves the valuable contributions that will come when every member of our society is included in the process. I thank you, Mr. Chairman and Senators, for giving me the opportunity to testify.

The CHAIRMAN. Thank you very much. We have here the fellow whom we discussed earlier, Senator Warner. We have entered your statement in the record already. Senator Stevens has offered that. I understand you would like to have a minute before you go back on the floor to the War Powers Act.

Senator WARNER. Thank you, Mr. Chairman, I am floor manager of the pending legislation on the floor. I appreciate the courtesy extended me by the Chairman and the distinguished Ranking Minority Member of the Committee. These hearings are very important. Generally I am supportive of the objective—we must establish the need, and that's the purpose of these hearings. And I thank you.

The CHAIRMAN. We thank the Senator, and we'll vote your proxy with reverence.

Next will be Mr. Jack Gannon, Executive Secretary of Gallaudet University Alumni Association.

TESTIMONY OF JACK GANNON, EXECUTIVE SECRETARY, GALLAUDET UNIVERSITY ALUMNI ASSOCIATION

Mr. GANNON [through interpreter]. My name is Jack Gannon, and I am the executive secretary of the GUAA. I am very pleased to be here today to represent our alumni, most of whom are deaf. I also speak as a former teacher of the deaf, as a deaf consumer, and, to a point, as a television viewer.

Good morning, Mr. Chairman, thank you and members of the Senate Rules Committee for the opportunity to respond to the feasibility of captioning television of the Senate floor proceedings for the benefit of deaf Americans.

You can imagine a world where your television set has a picture but never a sound. That is what it is like for a deaf person to watch television without captioning. The advent of closed captioning has made a tremendous impact on our lives and has brought us closer to the American mainstream.

Although captioning has made significant inroads, there are still many areas of society in which we hearing-impaired people are denied access. One such area is the limited chance to become involved in the day-to-day workings of our government. Surely this is a right that no one should be denied. As we celebrate the 200th birthday of our Constitution, it seems most appropriate that all members of our society should have the opportunity to participate in the government envisioned by our founding forefathers many years ago.

Just recently the Iran-contra hearings, which were close-captioned and shown over ABC Television, were of much interest to us, as they were to other Americans. Thanks to the sensitivity of ABC Television, we were able to watch the day-to-day drama and interplay between the executive and legislative branches of our government.

But much of the other proceedings are denied us. We vote, but we do not have the opportunity to follow our Congress representatives in action.

How are we to form fair and objective opinions of their effectiveness? Must we, like Will Rogers, depend only on what we read in the newspaper?

We want our deaf children to become familiar with our democracy and the workings of our government, yet we deny them access to much of the live information. That denial only serves to perpetuate the continuancy of a lack of political understanding and involvement among many deaf Americans.

Captioned television of Senate proceedings would serve to involve our young deaf people in the functions of our government. Those captioned proceedings could be incorporated into a teacher's lesson plans. Government would then come alive in the classroom. The historical events which can sometimes seem far remote and impersonal when you read them in the history books could take on a more personal meaning when seen through the eyes of young deaf people. Elected officials who may be known by name only would become real people and not just a picture in a newspaper. The results of our votes would take on more significance. What is a better way to become involved in our government than to be more knowledgeable about it? Captioned television programs can contribute much to that end.

Captioning the proceedings of the Senate would also be setting a wonderful example for others in government and private industry. We deaf people would benefit greatly by this, but society would benefit the most, because of our increased involvement.

Our alumni fully endorse captioning these proceedings and any other programs that will contribute to the removal of barriers that, in our technological age, have no reason to exist.

Thank you.

[The prepared statement of Mr. Gannon follows:]

PREPARED STATEMENT OF JACK R. GANNON, EXECUTIVE SECRETARY, GALLAUDET UNIVERSITY ALUMNI ASSOCIATION

My name is Jack R. Gannon. I am Executive Secretary of the Gallaudet University Alumni Association. I am pleased to be here today to represent our alumni, most of whom are deaf. I speak also as a former teacher of deaf children, as a deaf consumer and, to a point, as a television viewer.

Thank you, Mr. Chairman and members of the Senate Rules and Administration Committee, for the opportunity to respond to the feasibility of captioning the televised Senate floor proceedings for the benefit of deaf Americans.

Imagine a world where your television set had a picture but was permanently without sound. This is what it is like for deaf people to watch television without captioning. The advent of closed captioning has had a tremendous impact on our lives and brought us closer to the American mainstream.

Although closed captioning has made significant inroads, there are still many areas of society in which we hearing impaired people are denied access. One such area is the limited chance to become involved in the day-to-day working of our government. Surely this is a right that no one should be denied. As we celebrate the 200th birthday of our constitution, it seems most appropriate that all members of our society should have the opportunity to participate in the government envisioned by our founding fathers so many years ago.

The recent Iran Contra hearings, which were closed captioned and shown over ABC-TV, were as much an interest to us as to other Americans. Thanks to the sensitivity of ABC-TV, we were able to witness the daily drama and interplay between the executive and legislative branches of our government. But, much of the other proceedings are denied us. We vote, but we do not have the opportunity to follow our congressional representatives in action. How are we to form a fair and objective opinion of their effectiveness? Must we--like Will Rogers--depend only on what we read in the newspaper?

We want our deaf children to be familiar with our democracy and the workings of our government, yet we deny them access to much of the live information. Such denial only serves to perpetuate the continuance of a lack of political understanding and involvement among many deaf

Americans.

Captioning the televised Senate proceedings would serve to involve our young deaf people in the functioning of our government. These captioned proceedings could be incorporated into a teacher's lesson plan. Government would then come alive in the classroom. The historical events, which can sometimes seem remote and impersonal when read in a history book, could take on a more personal meaning when seen through the eyes of a young person witnessing Congress at work. Elected officials who might be known by name only would become real people, not just a picture in the newspaper. The result of our votes would take on more significance. What better way to become involved in our government than to be more knowledgeable about it? Captioned televised programs can contribute greatly toward this end.

By captioning its proceedings, the Senate would also be setting a wonderful example for others in government and private industry to follow. We deaf people would benefit greatly by this, but society would benefit the most because of our increased involvement.

Our alumni fully endorse captioning these proceedings and any other programs that will contribute to removing barriers that, in our technological age, have no reason to exist.

Thank you.

The CHAIRMAN. Thank you. [To interpreter] You do very well.

I couldn't help but think, when Dr. Gannon said that we would be more knowledgeable, if we could hear what our Congressmen and Senators are saying so we can vote intelligently, I am not sure that he would not be better off taking Will Rogers' philosophy. [Laughter.]

Let me ask these questions, of Dr. Davila.

Do you caption at the University?

Dr. DAVILA. Yes. We have a closed-circuit television system in operation throughout the campus and all of the programs we produce are captioned.

The CHAIRMAN. There are several students from my state of Kentucky at Gallaudet, and I believe a member from our state is on your board, a newspaper publisher from Mt. Sterling, Kentucky and I've had some input particularly with your budgeting problems with the Congress. How much training or emphasis is placed on lip reading?

Dr. DAVILA. A lot. We put quite a lot of emphasis on the philosophy of total communication. Total communication includes helping young deaf people develop all of the communicative skills they need; it includes use of speech, rules of amplification, and use of sign language and other forms of communication. We provide a well-rounded program. We have a very fine, sophisticated, state-of-the-art speech and hearing center on campus.

The CHAIRMAN. I have travelled several times with a young lady from Madisonville, Kentucky, who graduated from your university to be a social worker, and I have chatted with her with very little difficulty. I have no sign ability, but she and I conversed freely. Every once in awhile she would have to write me a note, but I want to tell you I was amazed at her general ability.

How many deaf people are there in the United States?

Dr. DAVILA. Well, when we talk about deaf people, we talk about people, like myself, for whom the sense of hearing is non-functional for the ordinary purposes of life with or without amplification—so we are talking of about half a million people who are so profoundly deaf they can't hear at all, and who largely rely on sign language for their communication.

Mr. GANNON. Could I add to that?

The CHAIRMAN. Sure.

Mr. GANNON. There are over 20 million hearing-impaired people in the United States, and it may be of interest to you to know that sign language is the fourth most widely-used language in our country.

The CHAIRMAN. We use two terms, "deaf" and "impaired." Now, do you consider a senior citizen who, by virtue of age has lost his or her hearing, impaired? Is that the definition that you would put on that individual?

Dr. DAVILA. Yes. Hearing-impaired is a generic term; hearing impairment includes every person who has some hearing loss. On the hearing spectrum, from here to there, many people are totally deaf, but there are also many who may be only slightly hard of hearing, for example.

The CHAIRMAN. So one cover word would be "impaired."

Mr. GANNON. Right, that's the umbrella.

The CHAIRMAN. That's the umbrella. How many senior citizens are in the "impaired" category?

Dr. DAVILA. It's difficult to answer that question, not having information with me now. But there is a large number of senior citizens who became deaf in later life, and they pose a different set of requirements.

The CHAIRMAN. I have some difficulty with my in-laws. My father-in-law's hearing improves, and he can hear a lot of things that we discuss that probably we would prefer he might not. But that's unusual.

I have no further questions. Senator Stevens?

Senator STEVENS. At your university, how do you use captioning? In all classes?

Dr. DAVILA. Just about every film or video presentation provided or used for the purpose of instruction on the campus is captioned. We recognize the critical value of captioning. We have access to a number of programs that we ourselves captioned, and caption those that are not captioned by the public sector.

Senator STEVENS. Well, that's what I'm getting to. I heard about that. How do you do that? Do you captain some of the programs that are not captioned as they come through from the networks?

Dr. DAVILA. Yes, we have excellent facilities and technology available on our campus.

Senator STEVENS. What system do you use? Do you have your own system?

Dr. DAVILA. We have our own technology available for the purpose of captioning—our own equipment.

Senator STEVENS. I'm trying to get to whether you use any of these systems that are represented by people here today who are trying to sell them to the Senate. Do you use any of those commercial systems, or did you devise your own?

Dr. DAVILA. I'm sorry I'm not familiar with that technology myself, but we have the equipment to caption. We don't do that commercially. We only caption material for the purpose of use within our programs.

Senator STEVENS. I see. Thank you very much, thank you both.

The CHAIRMAN. Thank you very much, gentlemen, you've been very important to the hearing this morning.

Ms. GANNON. Mr. Chairman, I think it may be of interest to you to know that my voice this morning is from Kentucky. She's a Kentuckian, she's a daughter of deaf parents.

The CHAIRMAN. I knew there was something I was enjoying about this conversation. [Laughter.]

We are going to have another panel this morning—Dr. William C. Oliver, president, National Shorthand Reporters Association; Mr. Gary Olsen, executive director, National Association of the Deaf; and Dr. Frank Sullivan, former president, National Fraternal Society of the Deaf. Please come forward.

We are pleased to have Senator Inouye, who I believe serves on the board of directors at Gallaudet University, and is very interested in this hearing this morning, and is a very influential Senator.

Do you have any statement that you'd like to make, Senator?

Senator INOUYE. No, Mr. Chairman.

The CHAIRMAN. Dr. Oliver, please proceed first, and then Mr. Olsen and Mr. Sullivan will follow.

TESTIMONY OF PANEL CONSISTING OF WILLIAM C. OLIVER, PRESIDENT, NATIONAL SHORTHAND REPORTERS ASSOCIATION, LITTLE ROCK, AR; GARY OLSEN, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF THE DEAF, SILVER SPRING, MD; AND FRANK SULLIVAN, FORMER PRESIDENT, NATIONAL FRATERNAL SOCIETY OF THE DEAF, GAITHERSBURG, MD

Dr. OLIVER. Thank you very much. I appreciate the opportunity of being able to come here, and I come really representing no one except my involvement with the deaf community throughout the United States. My primary involvement has been in the state of Michigan. I did live in your state for three years, Senator Ford, and I now am involved in Little Rock, Arkansas, working in developing some programs hopefully for the school for the deaf there.

I became interested in working with the deaf some ten years ago at which time it was my first encounter with the hearing-impaired. I further am very much involved in the National Shorthand Reporters Association, of which I serve as president at this time. It's interesting that my avocation and profession have come together because it is the court reporters that do captioning, of which you have several competent on your staff at this point that can serve in that particular function.

I also am involved with a corporation that owns proprietary schools. I do academic research and development for those schools. Those are primarily court reporting schools.

I am in the process of developing, for background history for you, a program for hearing-impaired students in the school for the deaf in Arkansas, using a stenographic machine for text data input, and we feel that this is going to be very successful.

I've had the opportunity to travel to a minimum of thirty different states making presentations on captioning. During those presentation times I always invite a deaf leader of that particular community to come in and present to our members of the National Shorthand Reporters Association in the different states.

I think I became most impressed with what captioning can do when I was completing my dissertation. I was financed by the National Shorthand Reporters Association at which time I was working in an administrative capacity in Wayne County Circuit Court in Detroit. We took into that courtroom literally all of the technology that is available to court reporters at this time. This technology provided, on counsel table, a viewing screen. Also, on the judge's bench, an additional viewing screen. We provided a floating screen in the courtroom that could be utilized for witnesses, deaf witnesses, and jurors. Michigan has a community of approximately 250,000 deaf in the metropolitan area, and 2.5 coming to court on a regular basis.

We had change of venue from some of the outside counties wherein judges would bring in hearing-impaired individuals.

It was most important to me, after I would see the testimony taking place, both with an interpreter and the captioning, during a legal proceeding, to interview the deaf afterwards on a personal

basis. The deaf indicated to me that the sound barrier literally had been broken by this technology. For the first time in their existence they had been able to sit through a legal proceeding and understand what was going on.

It was also most dynamic for me to get informational feedback from these individuals that they felt it was one of the greatest learning experiences that they had been through.

Again traveling through the states and talking to deaf individuals that had been involved with captioning, almost a hundred percent have indicated to me that because of the advent of captioning, they have been able to increase their reading skill, giving them knowledge in many different areas. They have been able to increase their writing skill, of course, which is all linked with communication.

That the benefit to the hearing-impaired, by their own admission, is in the area of academics, especially in the area of legal proceedings, became very clear, and it is so clear that we, the National Shorthand Reporters Association, have made a pledge that we would take this type of technology to just about every major court system in the country. We have established ingenuity with financing, so it has not been a burden on the taxpayers. We are prototyping this right now in three different courts—one in Chicago, a federal court; one in Phoenix, a federal court; and the court that I mentioned in Detroit.

Also I have support letters coming from hearing attorneys that work with deaf clients who had never had deaf clients in the past. These attorneys have indicated that there was no problem in communication during the legal process in which they had been involved, being able to use this captioning device that we had in the courtroom. I also had the opportunity about three years ago to serve as a part-time interpreter for an individual in the state of Michigan who was college-educated and deaf. This was the second individual in the United States to sit as a juror in a criminal trial. This individual had an interpreter throughout the entire trial, but later indicated to me the benefit that he felt that he would have had if he had the veiwing capability of the captioning technology at that time. Inasmuch as sign language is sometimes conceptual, he felt that perhaps he missed some of the pertinent information, and he also felt that captioning would have been very advantageous to him as he went into deliberations.

I think it's very advantageous for us to be considering captioning, where we can, for the hearing-impaired. I am especially interested in bringing this type of technology to the young deaf adult and college-age student wherein they can have the benefit of the legal process as it takes place in our country.

I think that by being able to utilize captioning in group sessions such as schools and colleges that this becomes one of the best instructors and best teachers that the hearing-impaired could have, "hearing" the Senate floor proceedings via captioned testimony in their classroom situation.

I would urge the Committee to strongly consider using captioning for the Senate floor, hearings, and whatever other influence that they could have in the production of captioning for the hearing-impaired.

I would like to conclude with one comment that was made in part by Senator Harkin, very impressive to me. Many statements that I have read of Helen Keller, when she spoke before large groups, indicated that of all of the handicaps that she had, by far the worst was the handicap of deafness; the handicap of blindness separated her from things, and the handicap of deafness separated her from people. I believe that we have broken the legal sound barrier and we have broken the people-to-people sound barrier by captioning. I certainly urge this Committee to support that.

Thank you.

[The prepared statement of Dr. Oliver follows:]

PREPARED STATEMENT OF WILLIAM C. OLIVER, PHD,
PRESIDENT OF THE NATIONAL SHORTHAND REPORTERS ASSOCIATION

As an introduction, I am William C. Oliver, Academic Research Advisor for Educorp International, a corporation that owns and operates court reporting schools throughout the country.

Further, I am the President of the National Shorthand Reporters Association and an individual who has had considerable involvement with the deaf community, especially in the State of Michigan.

I have been involved in academic pursuits for the hearing impaired, involved with several agencies servicing the deaf, and served in every official office of the Hearing and Speech Center of Detroit, Michigan.

I stand before the United States Senate Committee on Rules and Administration as an individual in support of captioning the televised Senate floor proceedings for the benefit of the hearing impaired.

As the current President of the National Shorthand Reporters Association, and having served on its Board of Directors for nine years, one of my major thrusts has been captioning for the hearing impaired.

I have been involved in the educational process of our members from the conception of captioning to the present time. Also, because of my involvement it has been made a part of our association's internal educational process to learn the culture of the deaf community.

We have involved ourselves in twelve clock hours of presentation by a representative of the Department of Labor, Division of the Deaf and Deafened, State of Michigan.

The intent of these presentations were to better understand the benefits of captioning, where and how we could improve existing programs and the encouragement to proper agencies for additional programs to be captioned.

Additionally, with the financial support of the National Shorthand Reporters Association, I completed my dissertation by a project entitled "Courtroom of the Future." In this working dissertation we literally brought captioning capabilities to Wayne County Circuit Court, Detroit, Michigan, for the benefit of a 250,000 person hearing impaired community. This was the first "legal captioning" ever installed in a trial court in the United States.

The benefits to the hearing impaired were tremendous, in as much as the legal sound barrier was finally broken, thereby not only assisting the hearing impaired, but establishing new communication patterns between the legal community and deaf clients.

In support of the benefits rendered I make reference to

"Attorneys' Computer Report," Page 11, 1986; "LAWYERS TURN TO HIGH TECH IN TOUGH CASES."

"A deaf couple's divorce recently put a sophisticated new computer system to the test. The system, installed in Wayne County, Michigan Courtroom, helped the couple communicate with each other and the Court better than any other method, according to the attorney for one party.

"REAL LIFE APPLICATIONS

"Stanley Dobry, a Detroit sole practitioner who represented the husband in the deaf couple's divorce case quickly became a convert to the technology. Despite the fact that the Court provided an interpreter, Dobry says the computer system overcame the litigants' disability.

"It enabled everybody to follow along, either through the interpreter or through what was on the screen, he says. Because the wife subvocalized while she was signing, Dobry often couldn't hear the interpreter, missing her testimony. But I could look up at the transcript as it popped up on the screen, he says. It made the case much easier for all involved.

Upon the conclusion of each proceeding utilizing captioning in the courtroom, I interviewed the parties involved. Each person, without question, indicated to me that this was the first time that they had appeared in any type of legal setting where they understood the proceedings. Further, the deaf individuals all indicated to me that this was one of the greatest learning experiences that they had been involved with.

In additional conversations with totally deaf individuals it was related to me that since the onset of televised closed-captioning, which enhanced their learning experience, they also experienced a marked improvement in their reading ability and writing ability.

Thus, the benefit to a hearing impaired individual of captioning develops them academically.

Howard Watson, a college educated deaf individual and leader in the deaf community in the State of Michigan was the second person in the United States to sit as a "deaf juror." Mr. Watson had a sign interpreter for the duration of the entire trial process, even in the jury room for deliberation.

Since sign language is a conceptual language, Mr. Watson indicated to me that had he had the benefit of previous trial experience and captioning in the courtroom that he could have functioned as a better juror because of the educational experiences captioning would render to him.

It is the intent of the National Shorthand Reporters Association to bring to young deaf adults, high school and college age, the benefits of all governmental proceedings in this country. Indeed, the benefits of Senate floor proceedings presented in government and civic classes, would, without question, be one of the best

instructors possible. The benefit of such captioned proceedings would be of significance to the entire deaf community.

Members of the National Shorthand Reporters Association take great pride in the ability to break the sound barrier for hearing impaired individuals. Since our active involvement in closed captioning beginning in 1981, we have developed skills in that area of captioning and continue to pledge our support. This is evidenced by our continuing informational exchange with the deaf community.

In summary, I feel that deaf citizens of this great country of ours should have the same privilege as I have in being involved in our governmental processes. Closed captioning can bring this privilege to the hearing impaired.

I will conclude with a very impressive statement of Helen Keller, when she indicated that deafness was the greatest handicap that could be inflicted on any human being. She indicated that blindness separated her from things, but deafness separated her from people.

We have the capability through closed captioning to prevent that separation of people to people, and I strongly urge this committee to endorse captioning the televised Senate floor proceedings for the benefit of the hearing impaired.

The CHAIRMAN. Mr. Olsen, please proceed.

Mr. OLSEN [through interpreter]. Mr. Chairperson, Members of the Committee, on behalf of the National Association of the Deaf, the oldest and largest consumer organization of disabled people in the United States, which represents over 16 million hearing-impaired people, it gives me pleasure to be here and to have the opportunity to share with you our testimony, that there definitely is a need to caption the proceedings of the Senate.

Hearing-impaired individuals are a group of tax payers, and yet they are a deprived group when it comes to benefitting from their tax dollars. Most of us are over-taxed because we have to pay so much for different things to maintain a modest living in America. The ultimate question is: Why do we have to continue to pay so much? But we continue to do so because we want to learn and become part of the real American way of life.

We are guaranteed under the United States Constitution—and it's most appropriate timing right now, because the effort of America today is to disseminate the learning and meaning of the United States Constitution. I feel it a privilege to be a United States citizen, to have direct access to debate on the Senate floor.

It is our right to be informed and to maintain the opportunity to be continually informed just as others who are receive audiological information. We depend on visual communications. The technology is here. The cost is not a factor when it comes to maintaining one's freedom to be an equal United States citizen.

Without access to communication, the hearing-impaired remain ignorant. In fact, it means that our education is not the best, and this is not in the best interests of American welfare.

This type of captioning will contribute to the learning-educational setting in the home, in the schools, and in the community. I would like to stress that numbers of television viewers, or those with decoders, is insignificant. It is the right of access to information that is of importance. This is simply a modern version of our civil rights, the right to communication, to education, to learn and live as equal American citizens, and I would like to add that communication—and I stress visual communication—is not simply a civil right like the access to transportation and to buildings, but a human right. It is what makes us people. Communication has been called the father of human relationships. Visual communication is our conveyor of ideas, our vital information exchange; it is the core of our own growth and involvement, and the vital link to interactions with the world in which we live.

The Senate, upon adopting such captioning of their proceedings, will have a tremendous impact on the lives of many Americans other than hearing-impaired as well. For example, Hispanics or Italian-speaking people and other minority groups; they will benefit greatly from this exposure. In addition, the Senate will be making a great, if not one of the greatest, precedents in history towards setting an example for other governing bodies. The ramifications of captioning will enable a lot more people to participate in the political process.

This is most appropriate for the Senate, which has passed legislation that continues to benefit the disabled community.

Yes, there is a need, not only a need, but a must to have the Senate proceedings captioned. The National Association of the Deaf commends your Committee for your willingness to gather input from deaf people so that we can lead more productive lives and take part in the decision-making process. After all, America is a republic with a democratic principle.

Thank you.

The CHAIRMAN. Thank you very much, Mr. Olsen. Now, Dr. Sullivan?

Dr. SULLIVAN. Good morning, Senator Ford and Senator Stevens. Do you understand me okay? Am I using my voice right? Too high, too low? [To the reporter] My monitor over there says to bring it down a little bit.

The CHAIRMAN. I wouldn't pay too much attention to him. As long as you and I get along all right, don't you worry about anything.

Dr. SULLIVAN. My name is Frank Sullivan, former president of the National Fraternal Society of the Deaf. This is an organization that was established by deaf people themselves to combat the discrimination shown against them by insurance companies when they went to apply for life insurance.

Some years ago a deaf man composed a poem with the title, "You Have to be Deaf to Understand." This poem enumerated many of the frustrations that a deaf person faces in his world of silence. The poem does not ask for sympathy but for understanding of what it means to be deaf. I am reminded of this poem when I think of the many years that deaf people were denied access to television.

In the days of the silent movie deaf moviegoers got almost equal enjoyment out of the movies as people with normal hearing, except for the musical background. The dialogue of the characters in the movie was printed on the screen. Eventually came the "talkies," which is a term we use for the talking pictures, which exist today. And then we were back on square one when it came to enjoying movies. The only consolation we received was that in many cities we were given a reduced price for admission to the movies.

Then television came along and deaf people paid the same price as you people with normal hearing did for your television sets. We of course did not get the same amount of enjoyment and educational value.

In 1971 some understanding individuals, including those working with the United States government, became interested in seeking a solution to the predicament deaf people were in as regards the medium of TV. A series of meetings followed, culminating in the establishment of the National Captioning Institute. This was when a whole new world opened for deaf people.

Today, although our access to TV is still limited, the closed captioning of over 175 hours a week of TV programs is making a terrific impact on our lives. As some will say, however, it's no big deal in view of the fact that there are many hundreds of other programs on TV that are not captioned.

I do not think you have to be deaf to understand educational and entertainment value of closed captioning. One thing leads to another, and one of the those things is that the deaf communities

have become more interested and involved in the affairs of our government, thanks to the live captioning of the President's speeches, the Presidential debates, the Iran-Contra hearings, the Democratic and Republican conventions. As a result, the deaf community is much more informed.

As one member of our organization used to tell me: "For the first time in my life I feel like an American citizen."

In recent years there have been a number of seminars and workshops throughout the country. These seminars and workshops were designed to help deaf people better understand how our government functions at all levels. These have led to the persons in those seminars taking a more active role in the affairs of their states, to get to know the Senators and Congressmen better, and they are able to discuss issues with them in a confident manner.

The Senate Rules and Administration Committee is in a very good position to contribute to the political savvy of deaf citizens of our country. By closed-captioning the floor proceedings, these citizens will be motivated to become more involved in issues that affect their everyday lives by "hearing" their Senators discuss matters concerning their country.

Of course, as it has so often been stated, live captioning does have a beneficial effect educationally. It's been pretty well accepted by educators that the language and reading skills of deaf people have improved. It is not difficult to visualize classrooms all over the country broadcasting the Senate floor proceedings. With closed captioning deaf students in these classes will have an opportunity to participate in class discussion.

We have come a long way since 1980 when we had only fifteen hours a week of closed captioning. Live captioning is quite new. When it began years ago by the National Captioning Institute, it would get a laugh and no small moments of irritation when words were misspelled, particularly proper names. However, with proper names, even the best of interpreters would make a mistake. Sometimes we would get some real dandies. We realize it takes time and training to produce the quality of captioning that we are getting accustomed to. The National Captioning Institute has made tremendous strides in this regard, due to working with many hours of live programming.

I am quite confident that the Senate Committee on Rules and Administration will soon make a strong recommendation that the Senate floor proceedings be close-captioned.

Thank you very much for this opportunity to make my comments.

The CHAIRMAN. Thank you very much, Mr. Sullivan—and you had your voice at the proper level.

Mr. Olsen, we were trying to determine the number of hearing-impaired individuals in the United States.

Do you have a ball park figure as to how many we might have?

Mr. OLSEN [through interpreter]. Including every aspect of deafness or just deaf people like myself?

The CHAIRMAN. Yes, including all.

Mr. OLSEN [through interpreter]. There are over 16 million, close to 17 million—between 16 and 17 million, including the elderly.

The CHAIRMAN. That will be a group that will be, I think, an important factor as to what we do overall.

Does your organization, Mr. Olsen, provide decoders for anyone?

Mr. OLSEN [through interpreter]. We probably are the largest not-for-profit organization marketing them other than NCI themselves. Our organization does offer at a discount price to our members and others, schools and students, discounts on those. We do not try to make money off of them as other private competitors do.

That's their right. America is a country for that. But I want to provide the opportunity for deaf Americans to get such decoders as cheaply as possible so that they can benefit from them.

The CHAIRMAN. Approximately how many decoders are provided through your organization annually?

Mr. OLSEN [through interpreter]. We just ordered a brand new order of 500, and, if I may quickly recall, I'd probably say we sell maybe 2,000 to 2,500 a year, and that's ongoing sales.

The CHAIRMAN. Well, let me ask you, how long will a decoder last? Does it have a lifetime?

Mr. OLSEN [through interpreter]. So far, for example, I bought one when they were brand new on the market years ago, and I still have it. In fact, I have two. I have one of the newer models which is doing a fantastic job. Some people say they have some problems but, as far as we know, most of them will last a long while.

In fact, many of us buy two, three or four—one for each television set that we have. It outlasts the TV set, I'm sure. And that's the reason we feel that there needs to be some kind of reduction in price, probably through competitive, private sectors. There's always potential with private sectors to come up with new technology, new ideas, and offer something better so that all of us will benefit from it.

The CHAIRMAN. Let me pose this question to Mr. Sullivan.

Do you think that captioning the Senate will have an educational value beyond a public information value?

Dr. SULLIVAN. So that deaf people will understand better how the government functions, and be able to contribute to their activities in their own State in support of their Senators or enable them to contribute to discussions in their States.

The CHAIRMAN. Let me ask this question of all three of you, and anyone who wants to answer will be fine.

In my State, of course, we have the School for the Deaf. A great football team, you know. It's unusual. You just have to be amazed, and then you watch them dance from the vibrations on the floor and go through all of that. I happened to see one of the teachers in the airport in Louisville. His plane was late and he was fearful his wife would become concerned. But there was not a TDD telephone.

Weil, I couldn't help him. There wasn't any way for me to communicate with his wife directly. So we now have a TDD telephone in the airport in Louisville, so if he's ever late—and the way the airplanes fly today, they are always late—he can reach his family.

What communications or association do you all have with any of the States as they relate to the schools for the deaf?

Mr. OLSEN [through interpreter]. We have a lot of experience. I'd like to mention, before we move on, that I'm from Indiana, and I'll

be seeing your team play against our team in two weeks. The Indiana School for the Deaf will play.

The CHAIRMAN. OK.

Mr. OLSEN [through interpreter]. But anyway I'll let you answer.

Dr. OLIVER. I was involved with the School for the Deaf in the State of Michigan on a very like basis, and also now I'm interacting with the School for the Deaf in Little Rock, Arkansas. And both institutions have indicated to me that they felt that this would be a very academic procedure and they would use this in the classroom in lieu of an instructor or in support of an instructor. They felt that obviously the picture that the deaf students would get from the televised captioned proceedings would be certainly more than they could explain without that.

In addition to that, I have been involved in every office of the Detroit Hearing and Speech Center, which services an area of 250,000 hearing impaired individuals, and I have been involved in several social groups for hearing impaired. Without question, the leaders in all of those groups have indicated to me the academic value that they would be able to get out of this type of proceeding.

Mr. OLSEN [through interpreter]. I'd like to add, years ago, I was a classroom instructor teaching American democracy in a civics class. And I can just think if I had had the benefit of having those Senate hearings and other hearings and proceedings captioned, I could have contributed a great deal more to my classroom students. It would have been a remarkable way of doing it, a remarkable education tool.

As for the information about airports, TDDs, lack of communication, all that, if the Senate does establish an example, we will have a lot of clout in convincing other people to make such information, audio information, bits of information visual with captioning on different screens that will benefit deaf people. And I'm hoping that you will see the factors to establish that example.

The CHAIRMAN. Have any of you read the Washington Post article today about CBS and NBC?

Well, let me give you some good news. Although ABC World News Tonight has provided real-time closed captioning since 1981, neither of the other two major evening networks shows has offered the service for the nation's largest deaf audience.

Then, earlier this month, CBS announced that the CBS Evening News with Dan Rather would be closed captioned along with certain other CBS news shows, probably starting in January. And NBC announced that the NBC nightly news with Tom Brokaw is going to real-time captioning Mondays through Fridays, and hopes to begin this service as early as November 2. With tenacity, progress can be made.

Dr. SULLIVAN. Wonderful news. We will have a choice of news programs to watch.

The CHAIRMAN. Well, that's part of this country, you have a choice.

Senator Stevens.

Senator STEVENS. You'll have the same choice I do, too, and that is not to watch sometime. [Laughter].

I'd like to ask you some questions concerning your role as consumers.

Is there a difference between these devices for decoding that we should know about?

Mr. OLSEN [through interpreter]. First of all, I think you have to be exposed to a variety of technology because there are new kinds of decoders that have appeared on the market and probably will be disseminated soon.

We support all kinds of equipment. For example, the old decoders, known as 1 and 2, don't have the capabilities that the new one offers. There are a lot of people, deaf people, with visual problems, and one decoder had an option of enlarging the script, the subtitles, so that it would improve the opportunities for those people to read it. And the other benefit of new devices is that—and I've seen it in action—some people have visual problems with color; they can't translate good color. They're limited to black backgrounds with white letters. And the new devices offer a change of color, and that will meet the needs of the viewers.

So there is potential for new things coming along, but I wouldn't be in a position to recommend what device to use.

Senator STEVENS. But I've suggested to the Chairman that we may want to confer with our friends in the House to see if they would like to join us in a common system and see if we could make a decision on a joint basis.

But are any of these decoders incompatible with the systems that are being offered to us today to put the captioning onto our system?

Mr. OLSEN [through interpreter]. The only problem that might be would be the Teletext which hasn't really reached its full developed potential. But I don't see that you would have any problems.

Dr. SULLIVAN. If you are talking about decoders, the only one that's on the market now that's pretty effective is the one that's marketed by the National Captioning Institute. It's the only one that is really effective.

Others have been around, but they haven't really gotten anywhere.

Senator STEVENS. I'm a little fearful about getting into some of these things. I know the scope the Cnairman wants to make in this hearing, but there seems to be an interconnection between some of your associations and the National Institute.

Am I right? Are your associations in any way affiliated with NCI?

Mr. OLSEN [through interpreter]. For example, I would say the National Association for the Deaf, no, we have a good working relationship with them because, all along, they have been the only providers of such kinds of systems and decoders for that matter.

We've been always supportive of them, and we do not take a stand on theirs being better than what's coming out. We always took a fair stand. If things come along, we promote those the same way because we are a consumer organization.

So I do not see our organization as supporting one over the other, but I don't know about the other organizations.

Dr. SULLIVAN. I would like to say that many of the members of the National Fraternal Society of the Deaf are also members of the NCI captioning club, the club which raises money to get more TV programs closed captioned.

Dr. OLIVER. Our association is involved with nobody except training court reporters. Court reporters are the individuals, and this may be part of the technology that you're talking about, that are writing on a stenographic machine in stenographic code. That code goes down into a computer and changes from stenographic code into English. Then, at that point, it is transmitted to the decoder and it goes around the country within a one to two second delay time.

I've had the opportunity to work with a variety of the different technologies, and I think that they can provide what you are interested in.

Senator STEVENS. It would seem to me that the broader we can get the whole spectrum, and the more participants in it, the more chance there is for some developing technology to bring down the cost. I just wondered whether there is a concentrated effort of all of the associations that are involved with deaf people to support one institution, or a feeling about having a broad spectrum involved in this developing technology.

Dr. OLIVER. I think as you talk to the different vendor of the basic technology that will feed into the decoder, and they begin to explain to you some of the idiosyncratic positives and negatives that they have, it will better give you an understanding.

We're talking about two different technologies here. First, we're talking about the decoder. It's my understanding you're asking about the technology prior to going to a decoder.

Senator STEVENS. The whole system.

I remember walking into a room and being shown a computer in the fifties. That was a whole room of devices. Now, that was the equivalent of my lap top computer today. I mean everything that was in that big room was as big as this.

Now, I think that this technology has to be developed by people who have capital and are willing to get in and try to mass produce these things because it appears to me if we're dealing with 17 to 20 million people—and with due respect, I don't criticize what you're doing, selling two to three thousand of these devices a year through the main association that's concerned with deaf people—we've got to get some greater production rates at lower costs.

Do you disagree with getting greater production rates at lower costs?

Mr. OLSEN [through interpreter]. I want to make a correction. When I said that "our association," I meant the National Association for the Deaf, sells about 2,500 units a year. But the NCI sells a lot more than that, and a lot of other groups sell a lot more than that. I think there are about 500,000 units. Maybe John Ball can answer that better than I can. But there are a lot more units being sold.

I am speaking only for my organization and what we market.

Senator STEVENS. Well, the Chairman and I both have tried to find out the annual demand for these devices. If we have 17 to 20 million people out there, how many new devices do you need every year to the point where every person who needs one will have one available?

Mr. OLSEN [through interpreter]. I would like to request that John Ball respond to that question. He is here in the audience.

The CHAIRMAN. Thank you very much. We appreciate you.

I have no further questions. We are pleased with your testimony this morning. And as you just heard, we hope we can cooperate with the House. The Senate is ahead of the House in this particular program, and we hope we can nudge them into joining with us instead of waiting around to see what we do.

Thank you gentlemen very much.

The next panel will be made up of Mr. John D. Ball, President, National Captioning Institute; Mr. Franklin D. Smith, Advanced Technical Concepts, Inc.; Mr. Robert W. Mawhinney, Chairman of the Board, Xscribe Corporation; and Mr. Robert Daniels, Director of Marketing, Captioning Concepts, Inc.

We will ask Mr. Ball to start with his testimony.

Mr. Ball.

TESTIMONY OF PANEL CONSISTING OF JOHN E. BALL, PRESIDENT, NATIONAL CAPTIONING INSTITUTE, FALLS CHURCH, VA, ACCOMPANIED BY EDWARD CARNEY; FRANKLIN D. SMITH, PRESIDENT AND CHAIRMAN OF THE BOARD, ADVANCED TECHNICAL CONCEPTS, INC., GREAT FALLS, VA; ROBERT F. MAWHINNEY, CHAIRMAN OF THE BOARD, XSCRIBE CORPORATION, SAN DIEGO, CA, ACCOMPANIED BY REBECCA A. AMROIAN; AND ROBERT DANIELS, DIRECTOR OF MARKETING, CAPTIONING CONCEPTS, INC., TARZANA, CA.

Mr. BALL. Thank you, Mr. Chairman.

Let me first of all thank you for this opportunity. I would like to point out that I have with me Mr. Ed Carney. He is the Assistant to the President for Consumer Affairs at NCI. Both of us have submitted written comments but, with your permission, Mr. Chairman, in light of the numerous questions, and we really appreciate this interest in closed captioning, I would like to be granted permission to make an oral statement as well as Mr. Carney make an oral statement.

The CHAIRMAN. I might say to you that we do have a vote and we are going to be leaving here. I don't object to you bringing an additional witness with you at all, and we'd be delighted to hear him if we have the time.

Mr. BALL. Okay. Well, let me proceed with my comments.

First of all, as you have heard Senator Harkin here this morning, as I guess many people who have been around the deaf community know, deafness is an invisible handicap. So, also, is the service we provide, closed-captioned television. And as I heard Senator Stevens' comment, there is a lot of misunderstanding and a lack of understanding as to what the service is about, which is understandable because it is closed, and the reason it's closed is that the majority of us do not like to see subtitles or captions appearing on the screen. Hence, the creation, back in the early seventies, of what we now call closed-captioning.

It would be nice to think that all programs were open captioned, and maybe that will happen some day, but we are stuck with the technology that requires deaf people to go out and buy decoders.

Let me acknowledge the fact and Senator Stevens may recall, that I visited his office a few years back with Nanette Fabray, who

is on our Board of Directors. And thanks to his support, Congress, and the Senate particularly, allocated monies through the Department of Education for the subsidy for this unit that we have here today. We call this Telecaption II. It is the second generation unit. And it was through that support from you, Senator Stevens, and others that we obtained that subsidy. We still enjoy that support through the appropriations on an annual basis, and we've just recently been given additional monies by the Department of Education not only to continue the support, but to, in addition, further develop the technology.

If I could address some of the issues that have been raised today on the deaf population. First of all, let me remind you that, as we have found at NCI, that when you provide the service for any handicapped person or persons, you are not only satisfying them but you're satisfying their close friends and family members.

So often I've had young people tell me that when they were growing up in a family of deaf parents they didn't watch TV. And the reason for that was "My parents always asked what's going on, what's happening?" Not only did that contribute, and may not have been a significant loss not to watch TV, but it did create a schism within the family, in that the youngster growing up didn't communicate too well.

Closed-captioning has changed that dramatically as we have found that many people have told us now they watch television on a family basis. Not only do they watch news and weather and Senate hearings, and others, but they also watch movies and so on.

As was mentioned by the Chairman earlier, NCI will be starting, within the next three months, captioning the NBC and the CBS News Programs. The Department of Education is providing the funds. The reason we want to do that is not only to provide the deaf with equal access, if you like, to the three national news programs, but we view that, as equally important, if we are gaining a greater inroad into the networks because, even today, despite the growth of cable and home video and other delivery systems, there is no question in our minds that the real movers and shakers in the television business are the networks. To the extent you can gain their cooperation in whatever way, you are giving yourself the opportunity of obtaining not only cooperation at the local station level, which we're seeing more of, but also gain cooperation from the others in the television industry.

So we are very pleased that that is going to happen in the next few months.

NCI is not a captioning agency, and is not a vendor. I'd hasten to remind you of Dr. Martin's comments earlier. We provide a service, and the service is more than just captioning television programs. If we leave any message today, we would hope we would leave the message that the Senate is really not considering what equipment to buy; indeed, it's not even considering, in our judgment humbly, who's going to operate the equipment? We hope the Senate, with the proper input, is going to decide how best can deaf people have access to their deliberations.

The Senate has a proud record of supporting not only the Institute in its formation back in the seventies, but the whole concept of captioning back in 1971–72. Indeed, it was through the Senate's pe-

titioning the FCC back in 1976 that the whole concept of captioning was approved as an authorized service for the hearing impaired through the broadcast networks.

It was also the Senate's initiative back in 1983 when, due to the lack of decoder sales, there was a serious drop-off in decoder sales for a number of reasons that I can explain if someone is interested. At the time, the FCC, due to pressure from outside, was seriously considering withdrawing that authorization. Thanks to the intervention of more than 25 Senators in an open letter to Chairman Fowler at the time, the Senate extended the authorization. So we now enjoy, through the Senate's support, captioning as a de facto standard, not only among the broadcasters but also the cablecasters and the home video people.

And as Dr. Martin said, it's also extended to Canada. Indeed, the whole concept of captioning is a means of giving deaf people access to television spread throughout the world thanks to the initiatives that were taken with the Senate's support back in the seventies.

We think it would be absolutely fantastic that the world's greatest deliberative body made the positive decision to go ahead and have its proceedings captioned. We're confident that many other democracies across the world would follow suit. We've seen that in the networks, cable, and other areas.

We think the Senate, in reaching the decision to televise its debates, in effect committed to also opening these debates to the hearing, because they contributed to the development of the technology back in the seventies, and we believe that that technology is at a stage where deaf people can readily have access to televised debates.

NCI, with the assistance of the Federal Government, has captioned a number of public affairs programs during the last five years, not only for ABC and NBC and, now, as I've said, for CBS, but we captioned all of the Presidential speeches, thanks to a contribution from Xerox. We captioned all of the Presidential State of the Union Addresses, the Presidential Press Conferences. The last time around, we captioned the Democratic and the Republican Conventions. We captioned the Presidential debates, and we are predicting that whether we do it or not, and we like to think that we are the people that should do it, but we are predicting that, in 1988, the Presidential year, all of these things are going to happen again.

We think we have an obvious commission at this juncture. We have taken the technology and the service to a point where really the only access that is lacking in terms of things that are in a public interest and are televised are the Senate and House debates.

We at NCI are encouraged by dialogue with the staffers who are going to advise this Committee on the best course of action. We are also pleased that we're going to be receiving a group of them at NCI on Friday. We have offered to cooperate in any way that they feel they want to recommend to the Committee. And we look forward to the day when not only the programs of these proceedings will be captioned, but that all deaf people will have access to them.

In response to some of the questions that Senator Stevens has raised, there are really a lot of aspects to this service.

First of all, you could view what the Senate is deliberating to some extent as really the purchasing of cameras—it is providing visible, if you like, access to deaf people.

The other side is like the television set. This adapter is, if you like, a loudspeaker to deaf people. The original unit, which sold for about $280, was sold exclusively through Sears back in 1980–81. For a number of reasons, which I mentioned, sales did not take off. One, there was insufficient programming; two, if you recall, we had a severe recession at that time; three, there was also a public awareness problem; and, finally, there was a technology confidence problem because one or more of the networks felt that this was not the correct technology. That disappeared in the 1983–1985 time frame, and out of that emerged this new unit.

This unit contains many of the things one would find in a TV set. The big difference is when you open it up, you find this inside. This is what is called the "decoder module." NCI designed and developed this module and the unit in which it is housed without any government or private sector support in 1985. NCI came to the Senate and the House and testified that if you can provide us with the subsidy, which was eventually approved, NCI, with the cooperation of Sears and others, would get it sold in the marketplace for under $200.

As you heard from Mr. Olsen of the NAD, NCI provided this unit to the NAD at cost, and the NAD sells this to members for as little as $180. This is the loud speaker for the deaf community. There are no other technologies. I've been in this business 18, 19 years. I've appeared before the Senate committees, I've appeared before the House Science and Technology Committees on this issue. If the Senate wishes to look at the technology, it is a complex issue, but I can point up that all of the broadcasters and cablecasters now accept this technology.

When one speaks of a "decoder", and we call this in general terms a "decoder", being built into VCRs, it is not a different unit. It is this box that NCI has provided and has encouraged others to use. To date, there is only one VCR manufacturer, a Florida firm called Instant Replay which uses the decoder. NCI sells these units to them and they integrate them into a VCR, which I believe they sell for about $600–$700.

NCI thinks that offers a choice for deaf people who can afford it; but we should add that this is the best buy by far.

NCI is also working with a cable equipment supplier and is in negotiations with them. We would like to extend the government subsidy. We don't have government permission yet to bring the price of that unit down. But what I'm saying basically is there is only one technology on the receiver side. With regard to how one generates closed captions, since the Senate debates are live, one has to use what are called court reporters. NCI believes that because it has more than five years of experience in this business that is providing captioning using court reporters, and believes it is an evolving profession. It is not court reporters in the sense that court reporters would create the transcriptions of the House and Senate and other proceedings. It is basically people, professionals, with critique from that profession who have to undergo specialized

training and, to some extent, have to modify their thinking and thoughtfulness in the process of generating captions.

We developed this back in 1983–84. We believe the technology is still in its infancy for a number of reasons, as we have stated in written testmony. First of all, we are looking at a reading rate that is all too high for many people; two, there are too many errors; three, there are a number of things that can be done to improve the throughput rate, that is the time from when the speaker speaks until the time the captions appear on the screen.

We would like to work with the Senate. We would like to work with the House. We would like to work with anyone. We want to be part of the next generation. We feel we have the ability to do that. And we are looking forward to that opportunity.

In closing, I would like to say that if the Senate which has, to some extent, created the Institute, and has continued to support it through the appropriations to the Department of Education, if the Senate does direct and approve a cooperative arrangement with the National Captioning Institute, you're helping us in many ways. You are helping us validate a whole existence to the private sector.

We have recently received a substantial grant from the Kellogg Foundation, and that is where the private sector looks to us and says do you enjoy the support of the Federal Government? We have enjoyed, up until very recently, the total support of the Federal Government through the Department of Education. We hope that you accept our expertise and are willing to work with us towards improving the access for deaf people of our nation's debates and political events.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Carney follows:]

PREPARED STATEMENT OF EDWARD CARNEY, ASSISTANT FOR CONSUMER AFFAIRS, NATIONAL CAPTIONING INSTITUTE

My name is Edward Carney. I am employed as Assistant for Consumer Affairs in the Office of the President of National Captioning Institute (NCI). Let me first of-all thank the Committee for this opportunity to comment on this very important matter. I have had what may be a unique background of experiences and contacts, not only with deaf and hard of hearing individuals and their organizations but also in the many agencies providing assistive services to these populations. Over the past 40 years I have been privileged to play a role in the activities of almost every organization of and for persons with impaired hearing, and as a result have developed and maintained close personal and professional relationships with consumers, nationwide.

Consumers constantly contact me, both by letter and by telephone - using a telecommunication device for the deaf - in a search for information about closed captioning, to suggest ways for improving caption services or to inquire the reason for captions not appearing for a program advertised as being captioned. Owing to the pioneering efforts, NCI has a high profile with the hearing impaired population which makes us something of a natural focus for this sort of inquiry.

Having been deprived of access and understanding of television for decades, the positive reaction to the availability of captioning since 1980 has been strong. Consumers quickly became habitual watchers of captioned television programs, and become frustrated when expected captioning does not appear. There are many points of possible disruption of captions in the complicated electronics of broadcasting, cable TV and VCR delivery systems, but in NCI experience, a majority of the problems are best resolved at the local level. When this information is shared with consumers, they become frustrated by the fact that few local cable TV systems or even TV stations have a telecommunication device which would allow deaf consumers to call on the telephone; nor do more than a few stations own a caption decoding unit and usually are unaware that a problem exists. Consequently, NCI is deluged with letters and TDD calls and demands that we take corrective action. NCI personnel spend many hours attempting to resolve the problems because no other agency has the knowledge, experience and empathy to provide the necessary advocacy involved. Captioning also is a very new experience to persons within the television industry and, as is common among average citizens, they usually are totally unaware of problems experienced by citizens who cannot hear. This is not callous disregard but rather a result of the lack of visibility of the disability.

NCI undertakes many activities as a service to consumers and in the continual effort to place more decoders into the hands of

consumers. Staff and financial restrictions do not permit undertaking some projects on a national scale, but state by state NCI is currently conducting programs which give low-income families in which there is a deaf member, an opportunity to obtain a decoder. These projects are subsidized by funds raised in the private sector by NCI and are usually for the benefits of hearing impaired children of school age or younger. Recently, a new project was launched in the metro Washington area which will allow indigent elderly persons to obtain these devices for a token sum.

During the past few years many factors have contributed to a ground swell of interest and involvement of deaf persons in the political process. The increase in number of captioned news programs provided by NCI including "Nightline", "This Week with David Brinkley" and the morning and early evening "ABC World News" have increased this interest. Soon they will be able to watch the NBC and CBS evening news shows as well. Many deaf viewers appreciated and benefitted from the recent captioning performed by NCI of the Iran-Contra hearings.

There is little doubt that captioning of televised Senate proceedings would enhance the understanding by millions of citizens who now only have the frustrating experience of seeing a speaker on the screen, or an historical exchange of opinion by some of the nation's leaders but without the benefit of knowing exactly what was said. This segment of the population for too long has been excluded from many of the benefits which other citizens take for granted. The Senate has an opportunity and, indeed, an obligation, to take the necessary steps to alleviate the discrimination which is depriving these people of their rights to full citizenship.

Thank you again for this opportunity to comment on the subject matter.

The CHAIRMAN. Thank you, Mr. Ball. We are going to have to move right along, or we are going to lose some valuable time here, so Mr. Smith, you be next.

Mr. SMITH. Mr. Chairman and Members of the Committee, thank you for this opportunity. I'll try to summarize my comments.

The CHAIRMAN. If you would, and your total statement will be included in the record as if given in total.

Mr. SMITH. To establish my expertise in the field of real-time captioning, I'd like to point out that my company, Advanced Technical Concepts, is a small business dedicated to the world of real-time captioning.

As your staff has probably already confirmed, there are many more user groups promoting the need for captioning than there are companies providing the capability. To the best of my knowledge, ATC is the only firm totally dedicated to developing computer software for real-time captioning. This is my primary business.

The product trade name is Instatext, and is currently used by the National Captioning Institute, the Canadian Captioning Development Agency, WGBH-Television in Boston, and for various meetings, including the Commission on the Education of the Deaf.

ATC has recently opened a real-time captioning development and training center in Reston, Virginia. Now to the question being asked.

Yes, it is feasible to caption in real time the Senate floor proceedings. Technically, the minimum requirements are a personal computer, real-time captioning software, an encoder, a steno machine, and a court reporter trained to do real-time captioning.

In terms of one-time cost, the computer and software are worth approximately $25,000. The encoder, $8,000. The steno machine, $2,500. Although the annual personnel costs are far greater, these are expenses you already incur.

Should the Senate proceedings be captioned? Yes, every American has the right to expect equal access to such information. For the hearing impaired, that means real-time captioning, because a large percentage of the hearing-impaired do not understand sign language.

Should open or closed captions be used? This is a question that has not been fully addressed today. I've attached to my statement a fairly detailed explanation of the technical aspects of real-time captioning. I will not go into that at this point.

To answer this question, I would very briefly define open captioning to mean every television viewer sees both the video picture and the captions. In other words, they are not closed, they are open to everyone. Everyone has to see them.

For closed captions, of course, it depends on those who have a decoder attached to their TV set, and have the decoder turned on.

Therefore the issue is how to provide equal access. Unless every hearing-impaired person has a decoder, the only way is to require open captions. The number of encoders does expand every year, but the number in use is only a small percentage of the total population that could benefit.

Who else would benefit from captions, especially open captions? Studies have been conducted that suggest many millions of hearing people of all ages have poor reading skills. Captions provide these

people with an opportunity to associate the spoken word with the written word, thereby improving their language skills.

The University of Maryland studied prison inmates, a majority of whom have poor language skills, and used captioned videotape programs to demonstrate that learning does occur from this technique. Admittedly, the programs used were perhaps a bit more interesting than the Senate floor proceedings would be.

Another good example are the millions of first-generation Americans who live in homes where English is a second language. Open captions would certainly generate an initial surge of comments from all types of viewers. At least one positive outcome would be a much greater public awareness of the problem.

My recommendation is to start with open captions for a six-month trial period, and then decide whether to continue, based on public response. Commercial television has not, and so far will not, take such a gamble.

My final point concerns the issue of captioning with your own personnel versus the use of captioning services. To maximize the benefits of using your own trained staff of reporters, your ultimate goal has to be doing it internally.

However, it is unrealistic to start such an undertaking without the best help available, which means using local experts in real-time captioning. The National Captioning Institute is the recognized leader in this field. Use of NCI captioning service during a one to two year transition period would provide the Senate with high quality captioning from day one.

Thank you.

[The prepared statement of Mr. Smith follows:]

PREPARED STATEMENT OF FRANKLIN D. SMITH
PRESIDENT, ADVANCED TECHNICAL CONCEPTS, INC.
BEFORE THE SENATE RULES AND ADMINISTRATION
COMMITTEE ON OCTOBER 21, 1987

HEARING ON THE FEASIBILITY OF CAPTIONING THE TELEVISED SENATE FLOOR PROCEEDINGS FOR THE BENEFIT OF THE HEARING IMPAIRED

Mr. Chairman and members of the Committee on Rules and Administration, thank you for the opportunity to appear before you today to present my views on the feasibility of captioning the televised Senate floor proceedings for the benefit of the hearing impaired. I would also like to thank Martha Spenger of the Rules Committee staff for her invaluable assistance in making this appearance possible.

To establish my expertise in the field of real-time captioning I would point out that my company, Advanced Technical Concepts, is a small business dedicated to the world of real-time captioning. As your staff has probably already confirmed, there are many more user groups promoting the need for captioning than there are companies providing the capability. To the best of my knowledge, ATC is the only firm totally dedicated to developing computer software for real-time captioning. The product trade name is InstaText and is currently used by The National Captioning Institute, The Canadian Captioning Development Agency, WGBH Television in Boston, and for various meetings including the Commission on the Education of the Deaf. ATC has recently opened a real-time captioning development and training center in Reston, Virginia.

Now, to the question being asked. Yes, it is feasible to caption in real-time the Senate floor proceedings. Technically, the minimum requirements are a personal computer, real-time captioning software, an encoder, a steno machine and a court reporter trained to do real-time captioning. In terms of one-time costs, the computer and software are worth $25,000, the encoder $8,000, and the steno machine $2,500. Although the annual personnel costs are far greater, these are expenses you already incur.

Should the Senate proceedings be captioned? Yes, every American has a right to expect equal access to such information. For the hearing impaired, that means real-time captioning.

Should open or closed captions be used? Attached is a fairly detailed explanation of the technical aspects of real-time captioning and how the whole system works. To answer this question, I will very briefly define open captioning to mean that every television viewer sees both the video picture and the captions. Closed captions would be limited to those who have a decoder attached to their TV set and have it turned on. Therefore, the issue is how to provide equal access. Unless every hearing impaired person has a decoder, the only way is to require open captions.

Who else would benefit from captions, especially open captions? Studies have been conducted that suggest many many people of all ages have poor reading skills. Captions provide one more sense of sight to reinforce the spoken word for those who can hear. Public awareness of the problem would be greatly enhanced.

Thank you.

The CHAIRMAN. Thank you very much, Mr. Smith. Mr. Mawhinney?

Mr. MAWHINNEY. Good morning, Chairman Ford and Senator Stevens. I am Robert Mawhinney, Chairman, Chief Executive Officer and founder of Xscribe Corporation.

Also with me today is Rebecca A. Amroian, our product manager for the company's captioning product line.

I appreciate the opportunity to tell you about Xscribe Corporation, and our involvement in promoting and supporting the closed captioning of televised programs for the hearing-impaired, more commonly referred to simply as captioning for the hearing-impaired.

Xscribe Corporation primarily markets products of software designed for the court reporting industry, the individuals whose skills are utilized for captioning. Xscribe is the principal part of my life, and has been for more than 15 years. It was my vision, and is now my dream come true. Xscribe is truly an American success story.

When we incorporated Xscribe in 1978, after more than five years of product development, there were only four of us, and subsequent product development and financing of the company was accomplished by sweat capital.

The product development did not come out of a garage. It came out of two dining rooms—mine and one of the other founder's. The early years after incorporation were spent selling to, and servicing, these products for court reporters in San Diego area.

After a few years we began expansion across the nation, and we now cover all 50 states, and export our product to Canada. For example, Xscribe equipment is used in the Senate in Ottawa. We are also now in discussion with the House of Commons in London for use in producing a record.

During the expansion of our business, we passed all our competitors and are now a leading vendor of computer-aided transcription, CAT, systems with a possible 50-percent market share.

In 1985, Xscribe was named the 17th fastest growing private corporation in America by Inc. Magazine. For our last fiscal year, ending March 31, revenues were almost $30 million, and we've been profitable over the past seven years, throughout this steep growth period.

Xscribe went public last summer, and is now listed on NASDAQ and quoted in newspapers throughout the country.

I'd like to place a summary of Xscribe's financials into the records, if I may.

The CHAIRMAN. Without objection it will be included.

Mr. MAWHINNEY. I also have copies of our prospectus when we went public.

The CHAIRMAN. That will be included in the record, also.

Mr. MAWHINNEY. Through placements of our computer and transcription systems in the Federal, State and local court systems throughout the country, we became aware of applying our technology for direct benefit of the hearing-impaired.

How this came about was through the Xscribe system's captioning capabilities. Using captioning, the court reporter takes down verbatim testimony in the courtroom, while the computer translates into English and displays them instantly on the computer

screen, so that a hearing-impaired individual could read the proceedings as they happen.

Then in 1982, at a California criminal trial, Xscribe, upon request, provided a deaf defendant the ability to read the testimony and questioning without relying on an interpreter. This individual was a witness and was asked questions, and answered questions, with the use of this equipment on the witness stand.

The defendant, as is true in many cases, could not read lips or sign language.

There have been many trials conducted this way since 1982, with Xscribe equipment. The captioning in the courtrooms talked about by Bill Oliver, a previous witness, are Xscribe systems.

My reason for telling you this is to explain how we became acutely aware of the unfulfilled needs of the hearing-impaired. Xscribe became committed to applying our technical expertise to assist this segment of our population.

Also, in 1984, the only captioning system available—at that time Instatext—the company that provided it went bankrupt, leaving no viable captioning system available.

The Xscribe closed captioning system was developed using the tried and true method of CAT, computer aided transcription, and adapting its use for broadcast.

With this system now available, as well as the availability of over 7,500 Xscribe-trained court reporters throughout the country, we feel that captions could become an integral part of all televised programming.

There are currently a number of national network programs being captioned, but there remains limited captioning activity in schools and in local broadcasting, and almost none in the Federal Government.

Much of this has been due to lack of technology as well as lack of knowledge about captioning. Xscribe has been working with local broadcasters to bring captioning to news and information programming, as well as with schools to provide classroom captioning for hearing-impaired students.

Our first demonstration to the staff of the U.S. Senate was in August 1986. In May 1987, a demonstration was given to staff and about 18 Senators.

It has been a slow process. The support must come from the community, both hearing and hearing-impaired, as well as from broadcasters, sponsors and elected officials.

Why should the Senate become involved? Because captioned material is a needed service for an important segment of this nation's population. The hearing-impaired comprise approximately ten percent of the population, and yet are so often ignored and excluded from mainstream communication.

This is simply because, unlike other physical handicaps, being hearing-impaired is an invisible handicap, and less recognized in society. Access to the Senate proceedings should be made available to all citizens. The hearing-impaired in each of your constituencies deserve the opportunity to both see and hear their Government in action.

There is another far-reaching benefit if the Senate provides captioned proceedings. If the Senate has its proceedings captioned, it

may become the catalyst that is needed to spur local level broadcasters, corporate sponsors, the general public, and even the hearing-impaired themselves, to be aware of captioning's availability and benefits.

The Senate can spread an important message by providing captions as part of their broadcast—the message that our Government recognizes and supports the rights of all Americans, including hearing-impaired.

Captioning is a new market for Xscribe, and it is where we can bring our technology and expertise to help the hearing-impaired. Captionists come from the ranks of court reporters. There are over 7,500 court reporters using Xscribe equipment today.

Also, Xscribe equipment, with its state-of-the-art technology, is the preferred system for those who purchase such equipment—roughly 50 percent of all systems purchased are Xscribe.

With this large customer base, Xscribe can quickly and efficiently bring up a new captioning installation. One attractive feature of the Xscribe system is the relative ease for new customers to become proficient.

Senator Stevens asked this question before: Gallaudet College here in Washington has and uses an Xscribe captioning system. National Technical Institute for the Deaf in Rochester, New York, also has and uses an Xscribe captioning system. Just this week, NTI, in Rochester, has taken on television captioning with a local broadcaster. They've obtained, also, sponsorship from a local business, so it's paid for commercially.

In addition, almost all real-time captioning installations use the Xscribe writer called StenoRam, including NCI, and CCDA, which is a Canadian nonprofit, captioning organization.

Well over 90 percent of real-time captioning today is written on the Xscribe writer. Interest seems to be building, and we are talking to a number of potential clients.

I was invited here from California as an expert in the use of captioning for the hearing-impaired. I recommend that the Senate purchase an Xscribe captioning system to caption the floor procedures of the Senate for television transmission to the 17 million or more hearing-impaired in this country.

As an additional option, we propose a service for several months to caption while the in-house staff is trained by Xscribe in the techniques and they achieve the experience to take over.

Also, the Xscribe system can be used producing the record of the Senate proceedings. This Committee can decide to use this equipment for this function at any time. Xscribe will provide the installation, training and following support, including an enhancement of the system as the art advances.

I believe that the purchase of this system is the best solution for the Senate's captioning requirements for the following reasons. Purchasing the Xscribe captioning system service and training gives the Senate control. Also, the Senate has an in-house staff that has captioning skills.

There may be some need for additional people, because of the increased workload.

The Xscribe system performance is the highest available. The lag time on the Xscribe translator, which is the time between the

spoken word and the written word, is two to three seconds. Low lag time is extremely important because of rapid scene changes on television.

Among court reporters, Xscribe is the system of choice over any other competitor by a wide margin, mainly because of superior performance.

The Xscribe writer and translator, both hardware and software, are manufactured in America in Xscribe's main facility in San Diego, California.

There are 30 Xscribe facilities around the country, with 135 employees.

The CHAIRMAN. Mr. Mawhinney, I don't mind your statement, but you're selling your product. I'm sure it's a good one, and you've done a good job selling it, but we're more interested in what this will do, rather than the product that you have available for the Senate to buy.

I don't want to be discourteous to you, but our time is going along and you've taken almost 12 minutes now, and so we do appreciate it.

If you'd like to close, I'd be delighted to let you do that.

Mr. MAWHINNEY. Thank you, Sir. I apologize.

The CHAIRMAN. No, I don't want any apology. If we had more time, you could talk all afternoon, but we just don't have it.

Mr. MAWHINNEY. Well, I could talk all afternoon. Thank you very much.

Winding up, we—Xscribe—support and do promote closed captioning for the hearing-impaired in this country, and we recommend that to the Senate.

[The prepared statement of Mr. Mawhinney follows:]

GOOD MORNING MR. CHAIRMAN AND MEMBERS OF THE RULES COMMITTEE:

I AM ROBERT MAWHINNEY, CHAIRMAN, CHIEF EXECUTIVE OFFICER AND FOUNDER OF XSCRIBE CORPORATION. ALSO WITH ME TODAY IS REBECCA AMROIAN, OUR PRODUCT MANAGER FOR CAPTIONING. I APPRECIATE THE OPPORTUNITY TO TELL YOU ABOUT XSCRIBE CORPORATION AND HOW IT PROMOTES AND SUPPORTS CAPTIONING FOR THE HEARING IMPAIRED. XSCRIBE IS THE PRINCIPLE PART OF MY LIFE AND HAS BEEN FOR MORE THAN TEN YEARS. IT WAS MY VISION AND IT IS NOW MY DREAM COME TRUE. XSCRIBE IS TRULY AN AMERICAN SUCCESS STORY.

WHEN WE INCORPORATED XSCRIBE IN 1978, THERE WERE ONLY FOUR OF US AND THE EARLY PRODUCT DEVELOPMENT AND FINANCING OF THE COMPANY WAS ACCOMPLISHED BY "SWEAT" CAPITAL. THE PRODUCT DEVELOPMENT DID NOT COME OUT OF A GARAGE; IT CAME OUT OF TWO DINING ROOMS, MINE AND ONE OF THE OTHER FOUNDERS. THE EARLY YEARS WERE SPENT SELLING TO AND SERVICING THE COURT REPORTERS IN THE SAN DIEGO AREA. AFTER A FEW YEARS WE BEGAN EXPANSION ACROSS THE NATION AND WE NOW COVER ALL 50 STATES AND EXPORT OUR PRODUCT TO CANADA. XSCRIBE EQUIPMENT IS USED IN THE HOUSE OF COMMONS IN OTTOWA. WE ARE NOW IN DISCUSSIONS WITH THE HOUSE OF COMMONS IN LONDON FOR USE IN PRODUCING THE RECORD. DURING THE EXPANSION, WE PASSED ALL OF OUR COMPETITORS AND NOW ARE THE LEADING VENDOR OF COMPUTER AIDED TRANSCRIPTION (CAT) SYSTEMS WITH POSSIBLY 50% MARKET SHARE. IN 1985, XSCRIBE WAS NAMED THE 17TH FASTEST GROWING PRIVATE CORPORATION IN AMERICA BY INC. MAGAZINE. THEY MEASURE GROWTH OVER A FIVE YEAR PERIOD. FOR OUR LAST FISCAL YEAR, ENDING MARCH 31, REVENUES WERE ALMOST $30 MILLION AND WE'VE BEEN PROFITABLE OVER THE LAST SEVEN YEARS, THROUGHOUT THE STEEP GROWTH PERIOD. XSCRIBE WENT PUBLIC LAST SUMMER AND IS NOW LISTED IN NASDAQ IN NEWSPAPERS THROUGHOUT THE COUNTRY. THE STOCK PRICE IS ONLY A LITTLE BEL THE INITIAL OFFERING PRICE EVEN THOUGH THE MARKET AS A WHOLE HAS DROPPED DRAMATICALLY. WE HAVE JUST PUBLISHED OUR SECOND QUARTER RESULTS. BOTH FIRST AND SECOND QUARTERS ARE UP SUBSTANTIALLY FROM LAST YEAR IN BOTH REVENUES AND

EARNINGS. THROUGH THE FIRST 6 MONTHS EARNINGS ARE $.27 A SHARE COMPARED TO $.04 LAST YEAR. XSCRIBE EMPLOYS OVER 300 AMERICANS, 2% ARE HANDICAPPED AND 18% ARE MINORITIES. .

THE GROWTH OF THE COMPANY TO DATE HAS ALMOST COMPLETELY BEEN IN THE COURT REPORTER MARKET. NOW THE COMPANY IS EXPANDING INTO OTHER MARKETS WHERE ITS TECHNOLOGY AND EXPERTISE CAN BE OF BENEFIT. BEFORE I TALK ABOUT CAPTIONING, I WANT TO BRIEFLY MENTION THE COMPUTER INTEGRATED COURTROOM (CIC). ONE OF OUR INSTALLATIONS IS IN JUDGE STRAND'S COURTROOM IN THE FEDERAL COURT IN PHOENIX, ARIZONA. THERE ARE THREE MONITORS, ONE FOR THE JUDGE AND ONE FOR EACH ATTORNEY. EACH OF THESE MONITORS CAN INDEPENDENTLY BE USED TO VIEW THE CURRENT TRANSCRIPT AS IT'S BEING WRITTEN BY THE COURT REPORTER OR BE USED TO RESEARCH ALL PREVIOUS TESTIMONY. JUDGE STRAND ENTHUSIASTICALLY EXPLAINS TO ALL WHO WILL LISTEN ALL THE BENEFITS OF THIS SYSTEM IN THE COURTROOM. ONE BENEFIT IS EXPEDITING THE TRIAL ITSELF. JUSTICE SANDRA O'CONNOR AND CHIEF JUSTICE WILLIAM REHNQUIST HAVE VIEWED THIS COURTROOM IN ACTION. CHIEF JUSTICE REHNQUIST HAS BEEN VERY ENTHUSIASTIC AND WOULD LIKE TO SEE MANY MORE INSTALLATIONS THROUGHOUT THE FEDERAL COURT SYSTEM.

CAPTIONING IS ANOTHER NEW MARKET FOR XSCRIBE AND IT IS WHERE WE CAN BRING OUR TECHNOLOGY AND EXPERTISE TO HELP THE HEARING IMPAIRED. CAPTIONISTS COME FROM THE RANKS OF COURT REPORTERS. THERE ARE OVER 7,500 COURT REPORTERS USING XSCRIBE EQUIPMENT TODAY. ALSO, XSCRIBE EQUIPMENT, WITH ITS STATE-OF-THE ART TECHNOLOGY, IS THE PREFERRED SYSTEM FOR THESE PEOPLE TO PURCHASE TODAY. ROUGHLY 50% OF ALL CAT SYSTEMS PURCHASED ARE XSCRIBE. WITH ITS LARGE CUSTOMER BASE, XSCRIBE CAN QUICKLY AND EFFICIENTLY BRING UP A NEW CAPTIONING INSTALLATION. ONE ATTRACTIVE FEATURE OF THE XSCRIBE SYSTEM IS THE RELATIVE EASE FOR NEW CUSTOMERS TO BECOME PROFICIENT. EVEN THOUGH THIS IS A NEW MARKET, XSCRIBE HAS MADE FIVE SALES OF COMPLETE SYSTEMS (BOTH WRITER AND TRANSLATOR) TO DATE FOR BOTH TELEVISION USE AND CLASSROOM USE.

GALLAUDET COLLEGE HERE IN WASHINGTON HAS AN XSCRIBE CAPTIONING SYSTEM. IN ADDITION ALMOST ALL REAL TIME CAPTIONING INSTALLATIONS USE THE XSCRIBE WRITER CALLED STENORAM. WELL OVER 90% OF REAL TIME CAPTIONING TODAY IS WRITTEN ON THE XSCRIBE WRITER. INTEREST SEEMS TO BE BUILDING AND WE ARE TALKING TO A NUMBER OF POTENTIAL CUSTOMERS.

WE HAVE A PROPOSAL WITH US TODAY. I RECOMMEND THAT THE SENATE PURCHASE AN XSCRIBE CAPTIONING SYSTEM TO CAPTION THE FLOOR PROCEDURES OF THE SENATE FOR TELEVISION TRANSMISSIONS TO THE 17 MILLION HEARING IMPAIRED IN THIS COUNTRY. AS AN ADDITIONAL OPTION, WE PROPOSE A SERVICE FOR SEVERAL MONTHS TO CAPTION WHILE THE IN-HOUSE STAFF IS TRAINED BY XSCRIBE IN THE TECHNIQUES AND THEY ACHIEVE THE EXPERIENCE TO TAKE OVER. ALSO THE XSCRIBE SYSTEM CAN BE USED IN PRODUCING THE RECORD. THIS COMMITTEE CAN DECIDE TO USE THIS EQUIPMENT FOR THIS FUNCTION AT ANY TIME. XSCRIBE WILL PROVIDE THE INSTALLATION, TRAINING AND FOLLOWING SUPPORT INCLUDING ENHANCEMENT OF THE SYSTEM AS THE ART ADVANCES.

I BELIEVE THAT PURCHASE OF THE XSCRIBE SYSTEM IS THE BEST SOLUTION TO THE SENATE'S CAPTIONING REQUIREMENTS FOR THE FOLLOWING REASONS:

1. PURCHASING A SYSTEM, RATHER THAN PURCHASING A SERVICE, GIVES THE SENATE CONTROL. ALSO, THE SENATE HAS AN IN-HOUSE STAFF THAT HAS CAPTIONING SKILLS. SOME ADDITIONAL PERSONEL MAY BE REQUIRED BECAUSE OF THE INCREASED WORKLOAD.
2. THE XSCRIBE SYSTEM PERFORMANCE IS HIGHER THAN THAT OF ANY OTHER COMPETITOR. THE LAG TIME ON THE XSCRIBE TRANSLATOR, WHICH IS THE TIME BETWEEN THE SPOKEN WORD AND THE WRITTEN WORD, IS 2 TO 3 SECONDS WHICH IS MUCH LOWER THAN ANY COMPETITIVE EQUIPMENT. LOW LAG TIME IS EXTREMELY IMPORTANT BECAUSE OF RAPID SCENE CHANGES ON TELEVISION. AMONG COURT REPORTERS, XSCRIBE IS THE SYSTEM OF

CHOICE OVER ANY OTHER COMPETITOR BY A WIDE MARGIN, MAINLY BECAUSE OF SUPERIOR PERFORMANCE. THE XSCRIBE WRITER AND TRANSLATOR BOTH HARDWARE AND SOFTWARE ARE MANUFACTURED IN XSCRIBE'S MAIN FACILITY IN SAN DIEGO, CALIFORNIA.

3. THERE ARE 30 XSCRIBE FACILITIES AROUND THE COUNTRY WITH THE SOLE RESPONSIBILITY OF SUPPORTING AND SERVICING XSCRIBE CUSTOMERS. WE HAVE A FACILITY LOCALLY IN GREENBELT, MARYLAND WITH FOUR XSCRIBE EMPLOYEES ON 24 HOUR CALL. THESE PEOPLE INSTALL THE XSCRIBE SYSTEMS, TRAIN THE NEW CUSTOMERS TO OPERATE THE SYSTEMS AND MAINTAIN BOTH HARDWARE AND SOFTWARE.

4. XSCRIBE IS A SUBSTANTIAL COMPANY WITH MORE THAN SUFFICIENT CAPABILITY TO SUPPORT THE SENATE IN THIS CAPTIONING FUNCTION. XSCRIBE HAS OVER 300 EMPLOYEES THROUGHOUT THE COUNTRY. XSCRIBE HAS DEVOTED MUCH PLANNING AND EFFORT TO CUSTOMER SUPPORT AND HAS GAINED A REPUTATION OF BEING VERY CUSTOMER ORIENTED. XSCRIBE HAS OVER 40 PEOPLE IN RESEARCH AND DEVELOPMENT AND IS CONTINUALLY ENHANCING EXISTING PRODUCTS AND INTRODUCING NEW ONES.

The CHAIRMAN. Fine. Thank you very much.

Mr. Daniels.

Mr. DANIELS [through interpreter]. Chairman Ford and Senator Stevens, I'm glad to have the opportunity to be here this morning. I'm here from Los Angeles, California. My name is Robert Daniels, I'm the director of marketing for Captioning Concepts, Incorporated.

Our president, Merle Moore, sends his regrets that he couldn't be here this morning.

I will only summarize—I know we don't have much time left, but I will echo the sentiments of all the other people here: Yes, we all strongly support captioning of Senate proceedings.

In The U.S. News and World Report last week, an article stated that there are 22 million deaf and hearing-impaired people in the United States today. That's a lot. And the fact that we have deaf people who are tax-paying Americans says even more about the need.

For those reasons, I support closed captions.

I want to respond to a few things that I've heard this morning, as well as to the questions that you two have had—some questions that were not answered accurately, I feel.

First of all, there is another company that has developed a new decoder. Our company has developed a new decoder that we expect to market for well under half the price of NCI's decoder. It was developed entirely with private funding. Our company has received no Government subsidy of any kind.

The Government has contributed $500,000 for public awareness related to closed captioning. That's good news for us, because it allows us to focus our efforts and energies on closed captioning.

That's the way I think it should be with captioning services—to focus on the quality of services.

Now, if you look at the cost factor, I have done some research, contacted other captioning services, and found that our captioning costs are less than half the cost of other services.

Unfortunately, because they received federal subsidies, they underbid us in closed-captioning contracts. That's not good news for us as a private, tax-paying company.

However, I do want you to know that CI is very interested, wants, and is willing to work with the Senate in closed-captioning with the provision of our equipment and services. We use a system called Digitext, which is, I think, the most sophisticated on the market today.

It's currently manufactured by Wang Laboratories, and has been well received. It doesn't require individual software for each caption writer. We have one system for all captioning writers. We have to train them to use that system.

We don't have much time, so I'll just end by saying again: Yes, closed captions. And, yes, there are some other private companies out there who are doing a great job with this.

Thank you.

The CHAIRMAN. You're mighty nice. That's very good. Thank you very much.

We'll move along.

Mr. Ball, I want to ask you a couple of questions and then I'll turn it over to Senator Stevens.

Who pays the cost of captioning a television program?

Mr. BALL. I can only speak for what we do at NCI.

Right now it changes almost on a monthly basis because of sources of funds, but we do about 100 hours of captioning each week at the present time. About 30 percent of that is the real-time captioning, which is, to some extent, the subject of these hearings.

The other 70 percent is what we call off-line captioning, that is the captioning of prerecorded programs.

We received funding from the Federal Government under competitive grant applications. Contrary to the popular belief, we submitted, in response to the Government, a proposal, and we are not embarrassed about the fact that as a nonprofit, we are more competitive than a profit-making competitor. But that's beside the point.

We enjoy the support of all three networks, in terms of funding of captioning for a number of reasons. I guess the biggest reason is we're the only institution—the only entity—that spends the time and trouble trying to create an audience.

You Senators have rightly asked questions as to the audience size. It should come as no surprise to you that the networks, the advertisers, the program producers, the syndicates, all want to know not only what is the audience size but what is the potential.

It is for these reasons that we enjoy the ongoing support.

It is also for these reasons that our costs—and these are accepted by the industry—may be a little higher. But in terms of Government funding, we are as competitive as any other entity.

So we have Government funding of about 40 percent, we have funding from the three networks, we have funding from the advertisers, we have funding from private institutions and philanthropic organizations, and we have funding from deaf people who send us money.

We're not ashamed of that, either. We've been criticized. This year, our captioning revenues will be about $8.5 million, with about $3 million to $4 million of that coming from Federal grants.

Of that $8.5 million, as Dr. Martin says, about $100,000 comes to us in contributions from deaf people.

We believe, and have believed during the past two or three years, that is essential, because it's all too understandable. All too many networks, advertisers, program producers ask the question about audience size, and say it's expensive to caption and the audience is small.

We use that as leverage. We say there is insufficient programming out there, as others have testified, and that's why we have caption problems.

So these are our major sources. We would be happy to give you our annual report, Mr. Chairman, or any other information you might like.

The CHAIRMAN. Well, Mr. Ball, how is a program selected to be captioned?

Mr. BALL. The Federal Government selects by dint of their requests for proposals. They ask us to do news, as when we go out on an RFP, as they call it, and we submit a proposal.

The CHAIRMAN. It's a generic request. That may not be the right term, but all news?

Mr. BALL. As much news as possible for the available funding.

The CHAIRMAN. The Government doesn't select the network? It's just news?

Mr. BALL. It's also the fact, as I've said, we proposed and the Government accepted the idea of captioning of three evening news programs.

With regards to other funding, of course, ABC only pays for ABC programs, as do NBC and CBS. Advertisers pay for the commercials that we caption. Program producers pay for "Dynasty," "Dallas," and other programs to be captioned.

Generally, as you would imagine, most of the large viewership programs are captioned today on prime time television, and the source of funding comes from some entity that has a vested or financial interest in that program.

The CHAIRMAN. Fine. Senator Stevens.

Senator STEVENS. Thank you, Mr. CHAIRMAN.

I've got a series of questions I'd like to submit to all of you about your company—how long it's been in business, where the funding comes from, and the relationship to your advisory boards, et cetera, to what you're doing. With your agreement, I'd just submit them to all of the people who have testified.

The CHAIRMAN. And we ask that you respond promptly, because we need to move on with this as expeditiously as we can.

[Responses to questions from Senator Stevens to the four prospective vendors are available for viewing at the Committee's office.]

Senator STEVENS. I think there are some other statements that would be forthcoming. Can you keep the record open for about ten days?

The CHAIRMAN. Yes, the hearing will be kept open for ten days for further comments. So if you've heard something today and would like to have an additional comment, or others would like to insert something into the record, it would be available to them, too.

Senator STEVENS. I'll ask Ms. Bunch to give you those when we're finished.

I have one last question. I'm interested in this comment that maybe we should pioneer open captioning.

We were talking here—we do that once in a while. We are rude, you know.

I come from a state that has 40-odd different dialects of Indian and native languages. If we start open captioning, what are we going to do about the people who don't read English?

They are reading Spanish in southern California, or Italian in the New York suburbs, I guess. But wherever it is, can these machines be used to direct closed captioning at audiences in languages other than English? Is that going to be difficult for us? Should we be concerned about that here?

Do any of you have any comments about that?

Mr. Ball.

Mr. BALL. Senator, this unit has two caption channels. It is quite easy with a very modest change of the circuitry to add another two channels.

Senator STEVENS. Let me ask that question to this gentleman over here. I'm very interested in his comments about his developing technology.

Will other languages fit into your technology, too?

Mr. DANIELS [through interpreter]. It can be done, but as of now I'm not really sure about its capabilities, but I'm sure that it could be done.

Senator STEVENS. You live in southern California so you must have a lot of Spanish demand. Are you doing that in different languages now?

Mr. MAWHINNEY. We have done some, mainly for demonstration purposes, in various languages such as Dutch and French, and some Spanish. But it's not on a commercial basis.

Senator STEVENS. I'm interested in the open captioning. I think one of our worst problems in this country is to try and get more of our people bilingual or trilingual, and I would be interested to know whether it's possible to use open captioning to bring different languages to children.

My little six-year-old is now studying French; my granddaughter is studying Russian up in Alaska.

Now, can we use this open captioning to deal with developing bilingual or trilingualism in the country?

You made the comment, so you should get the last answer, I think.

Mr. SMITH. Senator Stevens, to the best of my knowledge, trying to do captioning in other languages is not here today. For example, I understand IBM has worked with the French government for a long period of time attempting to do captioning, but it's very difficult because of the structure of the language.

You don't know the real meaning of a word at the beginning of a sentence until you get to the end of the sentence. To try to caption under those conditions makes it very difficult technologically.

Senator STEVENS. I see. Thank you very much. Thank you, Mr. Chairman. I appreciate your prompt response to my questions, gentlemen.

The CHAIRMAN. We appreciate your testimony today, and are sorry that we were pressed for time, but we finished just as the bell rang, and now we're going to vote over on the Senate floor, and exercise our prerogative.

Thank you all very much. The hearing record will be kept open for ten days for further comments.

[The hearing adjourned at 12:01 p.m.]

[The following materials were received to be included in the record:]

APPENDIX

STATEMENT OF HON. LOWELL P. WEICKER, JR., A U.S. SENATOR FROM THE STATE OF CONNECTICUT

MR. CHAIRMAN, I AM PLEASED TO TESTIFY IN SUPPORT OF BRINGING CLOSED CAPTIONING TO THE UNITED STATES SENATE. FOR PEOPLE IN OUR NATION WHO ARE DEAF OR HARD OF HEARING, CAPTIONING IS A MEANS OF OPENING THE DOOR TO THE WORLD OF INFORMATION--AN OPPORTUNITY THE REST OF US TOO OFTEN TAKE FOR GRANTED.

AS THE RANKING MEMBER OF THE SUBCOMMITTEE ON THE HANDICAPPED, I BELIEVE THAT CAPTIONING OF SENATE FLOOR PROCEEDINGS IS ESSENTIAL. CONGRESS HAS CONTINUALLY DEMONSTRATED ITS SUPPORT FOR INCREASING THE INDEPENDENCE, PRODUCTIVITY AND INTEGRATION OF PEOPLE WITH DISABILITIES INTO THE MAINSTREAM OF AMERICAN LIFE. YET WITHOUT ACCESS TO INFORMATION, FULL PARTICIPATION WILL REMAIN AN UNREACHABLE GOAL FOR MANY PEOPLE WITH DISABILITIES.

FOR PEOPLE IN OUR COUNTRY WHO ARE DEAF OR HAVE SIGNIFICANT HEARING IMPAIRMENTS, A MAJOR BARRIER TO FULL PARTICIPATION IS THEIR INABILITY TO RECEIVE INFORMATION BECAUSE THEY CANNOT EITHER HEAR, OR HAVE DIFFICULTY DOING SO. FOR THESE PEOPLE THE BUSINESS OF THE SENATE NEEDLESSLY REMAINS A MYSTERY. YET WE HAVE AN OPPORTUNITY TO REMEDY THIS SITUATION IN A SIMPLE WAY: AND THAT IS TO CAPTION SENATE PROCEEDINGS. THIS WOULD NOT ONLY ENABLE DEAF AND HARD OF HEARING INDIVIDUALS TO ACCESS INFORMATION, BUT ALSO

AFFORD THEM AN OPPORTUNITY TO BECOME INVOLVED IN THE POLITICAL PROCESS TO AN EXTENT NOT PREVIOUSLY AVAILABLE TO THEM, YET TO WHICH THEY ARE ENTITLED AS AMERICAN CITIZENS.

THE SENATE HAS ALREADY DEMONSTRATED ITS SUPPORT OF CLOSED CAPTIONING THROUGH INCREASED FUNDING FOR MEDIA SERVICES, CAPTIONED FILMS, AND OTHER TECHNOLOGY DEVELOPMENT PROJECTS. IT IS APPROPRIATE THAT WE NOW TURN TO OUR OWN OPERATIONS AND CONSIDER CAPTIONING SENATE PROCEEDINGS. INDEED IT IS TIME THAT THE SENATE MAKE THESE PROCEEDINGS AVAILABLE AND ACCESSIBLE TO CITIZENS WHO ARE DEAF OR HARD-OF-HEARING, AND THUS REMOVE ONE MORE BARRIER IN THE ROAD TO FULL PARTICIPATION IN LIFE FOR PEOPLE WITH DISABILITIES IN OUR NATION.

STATEMENT OF HON. RUDY BOSCHWITZ, A U.S. SENATOR FROM THE STATE OF MINNESOTA

As young man (in my teens) I had the opportunity to work as a busboy at a summer camp. Some of my fellow workers were deaf students from Gallaudet University. They taught me to understand signing and to fingerspell, but more importantly they gave me insight into the challenges faced by the deaf and hearing impaired.

When I was elected to the Senate I had a telecommunications device for the deaf (TDD) installed in my office so that I would be accessible by telephone to the deaf and hearing impaired, especially those in Minnesota.

Fifteen months ago the Senate decided to allow television coverage of the senate's floor proceedings. As a Senator from Minnesota, I want to represent all the citizens of my state to the best of my ability and ensure that they are informed about what is happening in the Senate. To better achieve these goals I believe that the Senate floor proceedings should be captioned.

There are about 20 million deaf and hearing impaired individuals in the United States who are currently denied access to Senate proceedings. Would they all watch the Senate? Probably not. Should they have access? Absolutely! The availability of close captioned television is growing and the Senate should be part of this movement.

Decoders necessary for captioning have dropped from $300 to $400 to about $200. There are currently about 160,000 decoders in use serving about 650,000 individuals. As more programs become available for the deaf and hearing impaired to watch, more decoders will be purchased and the price of decoders will probably continue to decline, making them more affordable.

It is my understanding that we have at least two options in captioning the Senate floor proceedings. One option is to contract with a commercial company to provide the service for us.

Another option is for the Senate to purchase the equipment. Should this be the best route to go, I believe that the estimated cost of $50,000 for equipment, the hiring of an additional stenographer or two, and possible additional training of some the Senate reporters on the new machines, is a small price to pay to bring our proceedings to the deaf and hearing impaired.

I have checked and have been assured that CSPAN can handle the captioning signal. As an aside, by the end of November CSPAN plans to have the senate signal transferred to Galaxy III, which is a newer more powerful satellite. This will enhance our viewing audience, which I am told is currently about 13 million homes.

While not an original supporter of televising Senate proceedings, my misgivings have in large part proven to be unfounded. (The biggest change seems to be a preponderance of blue suits and red ties.) Meanwhile, I have been pleased with the number of Minnesotans who feel they are benefiting from having the Senate debates available for viewing, and I believe this access should be expanded to include as many individuals as possible.

With that goal in mind, I want to lend my support to the captioning of the senate proceedings and urge my colleagues to join me in this effort to allow access to the deaf and hearing impaired.

CAPTIONING CONCEPTS INCORPORATED

30 October 1987

Ms. Martha Spenger
United States Senate
Committee on Rules and Administration
SR - 318
Washington, DC 20510-6325

Dear Ms. Spenger:

It was indeed a pleasure meeting you in Washington last week, not to mention the opportunity to witness Autumn's foliage in the area.

Because there was very little time left during my testimony, I am including some additional information about CCI as well as some comments on other testimonies made during this hearing as well as the corrected copy of my transcript.

On page 76, line 18, Mr. John Ball of NCI states, "We at NCI are not a captioning agency, we're not a vendor." They are indeed a captioning agency and a vendor. We bid against them often. They have told customers they would "squash us like a bug." When they know that they are bidding against us, they demean our company and substantially reduce their price. A deposition attesting to this fact can be provided. We must compete against our tax dollar on a daily basis.

Page 87, line 11, Mr. Smith recommends that NCI provide the captioning service. Why? He does not know what it would cost using some other service. Is it possible he would like to sell his equipment?

Mr. Mawhinney states in his testimony (page 94. line 22) that the X-Scribe system is the highest available. Captioning Concepts, Incorporated would like an opportunity to caption any program in competition with the X-Scribe system.

On page 104, line 2, Senator Stevens asked, "Will other languages fit into your technology, too?" I was unable to answer that question so I referred this to our engineer who gave me the following information. The Digitext System is unique in that it does not contain any words as do all other captioning systems. That is, on the X-Scribe System, any word that the captioning writer wishes to write must have already been programmed into the system. Therefore, if you wanted to write the word "houseboat" into the system and someone had not programmed the word and respective steno strokes for "houseboat" into the system, the X-Scribe System

CAPTIONING EQUIPMENT AND SERVICES
18401 Burbank Boulevard, Suite 208, Tarzana, CA 91356
Telephone (818) 609-9233

could not translate the proper word. If you wanted to write Spanish, then all of the Spanish words would require programming into this system.

Since the Digitext System contains no words in memory, not even English words, a trained Digitext writer that speaks Spanish or French can write the respective language on the Digitext System from printed text or a translator. We state this to emphasize the capabilities of the Digitext System.

We join NCI, WGBH, and the National Association of the Deaf in encouraging the closed captioning of the Senate sessions; however, we believe that any and all captioning vendors should be willing to bring to a conference room any equipment that they would intend to use and have all simultaneously caption the same program. This would permit on-site actual evaluation of the captioning as to quality and accuracy.

CCI started with Computerized Shorthand Reporters which has been in business for ten years now. CCI incorporated into a separate company two years ago to focus all of its activities on captioning equipment, technology, and services. One hundred per cent of the monies invested into CCI are from private individuals. The company receives no foundation nor federal support. With more than 15 employees now, CCI is a for-profit company with plans to go public within the next few months.

The company has never been involved in a bankruptcy proceeding.

None of the principle officers nor board members of CCI are receiving salaries. The principle owners of CCI are Merle D. Moore, Jerry Lefler, and LeRoy

CCI will be able to provide captioning services from the Senate premises or from our own offices. We will accommodate whatever is the most convenient for the Senate. We are prepared to provide continuous captioning services for the 16 to 18 hour days the Senate sometimes faces. Our system enables us to produce full and accurate transcripts in addition to what we feel is the best realtime captioning available anywhere.

The average delay time for realtime captioning performed by CCI is less than one second.

We hope to have the pleasure and privilege of working with you. CCI is sure that producers of NBC, CBS, PBS, and Fox Television will echo the same sentiments about us, that they have found our services to be very satisfactory and that our very economical costs are hard to beat.

Please do come to the demonstration of our Digitext and new decoder technology on November 10th in Washington. I'm looking forward to the pleasure of seeing you again.

With best wishes,

Sincerely,

Robert Daniels
Director of Marketing

cc: Merle D. Moore, President

enclosure

Addendum to the Record of the October 21, 1987,
Senate Rules and Administration Committee Hearing
on the Feasibility of Providing Captioning For the Hearing
Impaired of Television Broadcasts from the Senate Chambers

This will provide the National Captioning Institute, Inc.'s comments to assist in the clarification of issues raised in the hearing.

A. Decoders

Senator Stevens requested additional information on how many decoders were needed to meet the needs of the hearing-impaired population. Estimates are that eight percent of the civilian population, or 19.2 million people, has some degree of hearing impairment (see U.S. Congress, Office of Technology Assessment, Hearing Impairment and Elderly People -- A Background Paper, OTA-BP-BA-30 at p. 14). However, NCI believes approximately 3-5 million people have hearing losses severe enough to warrant the use of the decoders (see Id. at p. 21).

However, captioning has an educational potential such as improving reading skills of people and enhancing the learning of English by non-English speaking individuals.

The TeleCaption II decoder is available to consumers in 549 stores in 43 states, and there are an increasing number of stores indicating an interest in selling it (a list of stores carrying the decoder is included in Exhibit I). It should be noted that NCI began decoder development and marketing efforts in 1982 when it became evident that in the absence of private sector willingness to participate in this effort, the entire captioned television service was in jeopardy.

There are three areas which are critical to the success of more extensive distribution of decoders:

- decoder cost to the consumer must be reduced
- volume of captioned programs must increase;
- public awareness of captioning and of the decoder must be greater.

The Federal government has offered significant assistance in these areas. The Department of Education has provided competitively-awarded grant funding used directly towards lowering the cost of decoders to consumers. The volume of programming has been addressed by NCI's structured use of additional DOED competitive grant funding. These funds are used by NCI to leverage increased private-sector funding of programs, ensuring that the private sector bears a fair share of the costs of captioning. The Department of Education recently awarded a two-year competitively bid contract to a firm in Maryland to conduct public awareness activities on behalf of captioned television.

NCI has undertaken several programs designed to make decoders available to those who cannot afford them. As an example, NCI recently implemented a program called ACCESS (American Corporations Can Enhance Success for Seniors). This program is designed to allow elderly hearing-impaired persons living in poverty to purchase the decoder at a substantially reduced price. The success of this program has been made possible by the cooperation of the private sector (see Exhibit 2 for additional information).

It was mentioned at the hearing that a new decoder is being developed. Currently, there is only one decoder available in the United States and new decoders may become available in the near future. NCI is also working in the decoder development area. Alternate suppliers and investors in the decoder business would be very much welcomed by NCI and NCI would be happy to cooperate in the promotion of such devices.

The Committee asked for information on the expected average life of a decoder. Approximately 165,000 decoders have been sold to date and have been in use without the need for any extensive repairs or replacement. This would suggest considerable longevity of performance of the decoder. NCI estimates that a decoder should last at least ten years.

B. Captioning Service for the House of Representatives

Senator Stevens asked whether it would be beneficial to have both the House proceedings as well as the Senate proceedings captioned. NCI believes captioning the proceedings of both chambers would be beneficial to the viewing public by providing full accessibility to all televised congressional activities. Another benefit of captioning the proceedings of both chambers would be a lowering of captioning costs due to the greater utilization of personnel and equipment.

C. Alternatives to Closed-Captioning

Several questions were posed regarding alternative approaches to captioning services. NCI would like to provide additional information relating to Ms. Johanson's presentation on the different methods of making television

accessible to hearing-impaired persons. In summary, these methods are the use of open captions, closed captions, and sign language interpreters. The Committee should be aware that the vast majority of people with impaired hearing do not know sign language. Hence, if sign language was used to convey the audio portion of a television program, many people with impaired hearing would still not understand what was being said. Additionally, signs which appear on a television screen are only two dimensional and critical nuances of expressions are effectively eliminated. Finally, signers are place in the far corner of a television picture which takes away a substantial amount of visual information.

D. Captioned Programming

In the 1987-1988 broadcast season, there are over 240 hours of captioned programming every week, which includes approximately 100 hours per week if pay cable services are considered. A listing of captioned programs can be found in Exhibit 3. It should also be noted that with competitively granted U.S. Department of Education funding, NCI will soon be captioning the NBC and CBS nightly newscasts, in addition to the already captioned ABC newscast.

Senator Ford asked how captioned programs are selected by the U.S. Government. NCI believes this was not answered and thus offers a response. The Government makes funds available on a competitive procurement basis for the captioning of generic categories of programming. Current grants, awarded to NCI and other agencies, consist of national and local news programming, prime time programming, children's programming, and syndicated programming. Government criteria for selecting the party to provide captioning services include the cost of the service per captioned hour and assurance that the service will reach the largest audience possible.

Exhibit 1

STATE	# DEALERS	MAJOR DEALERS
Alabama	8	Long's Electronics, Inc. Macy's
Arkansas	1	Long's Electronics, Inc.
Arizona	2	
California	23	Macy's
Colorado	1	
Connecticut	7	Sears
Delaware	5	Wall to Wall Sound & Video
District of Columbia	4	Erol's Sears
Florida	6	Lechmere
Georgia	17	Macy's Lechmere
Illinois	16	Highland Superstores, Inc.
Indiana	5	Highland Superstores, Inc.
Iowa	13	Sears Applause Video
Kansas	3	Applause Video
Louisiana	6	New Generation Highland Superstores, Inc.
Maine	2	
Maryland	43	Circuit City Sears Erol's Wall to Wall Sound & Video People's Drug Home Health Care
Massachusetts	20	Highland Superstores, Inc. Lechmere Sears
Michigan	24	Highland Superstores, Inc.
Minnesota	20	Sears Highland Superstores, Inc.

Mississippi	1	
Missouri	15	Applause Video
Montana	2	
Nebraska	28	Applause Video Sears
New Hampshire	7	Lechmere Video Station
New Jersey	32	Wall to Wall Sound & Video Sears
New Mexico	2	West Coast Sound System, Inc.
New York	40	Sears Wall to Wall Sound Superstore Lechmere
North Carolina	10	Circuit City Lechmere
North Dakota	4	Sears
Ohio	22	Curtis Mathes Highland Superstores Wall to Wall Sound & Video
Oklahoma	1	Adventureland Video
Oregon	1	
Pennsylvania	61	Wall to Wall Sound & Video
Rhode Island	2	Lechmere Highland Superstore
South Carolina	1	Macy's
South Dakota	2	Sears
Tennessee	2	
Texas	39	Highland Superstores
Utah	1	
Virginia	35	Erol's Sears
Washington	1	Circuit City Peoples Drug Home Health Care
Wisconsin	14	Sears Highland Superstores

TOTAL # STATES = 43

TOTAL # DEALERS = 549

Exhibit 2

NCI news

NATIONAL CAPTIONING INSTITUTE, INC.

DATE: October 13, 1987
FOR RELEASE: IMMEDIATE

CONTACT: Don Thieme
Executive Director, PA&D
(703) 998-2416 (v/tdd)

BUSINESS LEADERS URGED TO SUPPORT NATIONAL PROGRAM FOR ELDERLY POPULATION

WASHINGTON, D.C. - Greater Washington's senior citizens who are hearing-impaired and in poverty may now be able to have closed-captioned television in their homes through Project ACCESS.

The National Captioning Institute (NCI) and GTE/Spacenet opened the first day of fundraising for Project ACCESS, American Corporations Can Enhance Success for Seniors, in Washington, D.C.

Dr. Jerry Waylan, President, GTE/Spacenet, was quoted as saying, "38% of all seniors over the age of 65 are hearing impaired. Hearing loss is the third most prevalent chronic disorder among the elderly. Project ACCESS encourages our community's business leaders to help these individuals understand the language of news and entertainment programs through closed-captioned television."

Project ACCESS plans to raise $270,000 in donations to provide closed-captioned decoders to 1,500 homes of hearing-impaired senior citizens.

The areas to be served by Project ACCESS are: the District of Columbia, Virginia (Alexandria, Arlington, Falls Church, Fairfax, Fairfax City, Loudoun, Prince Williams, Stafford, Manassas, Manassas Park), Maryland (Prince George, Montgomery, Calvert, Charles, Frederick).

(MORE)

The guidelines for eligibility for Project ACCESS are: Hearing-Impaired; Age 55+; Receiving one of the following assistance programs: SSI, Medicaid, Food stamps, Rent subsidy, Energy assistance; and has an annual income which places the individual in the poverty category. The eligible recipient will be asked to make a $10.00 contribution to Project ACCESS.

Closed captioned television offers 180 hours per week of network, cable and syndicated programming. However, each hearing-impaired person must have a decoder in their home or residential facility to access this free service.

Project ACCESS, by providing the necessary decoder, will allow the hearing-impaired senior to read television.

The spoken words on television, through captioning, are printed out in a bold, English text at the bottom of the screen, so that the hearing-impaired do not miss the important information offered.

The Greater Washington Area Project ACCESS is the model program upon which a national effort will be built. "It will mean a great deal to many people that our community begins Project ACCESS in a positive way," said Dr. Waylan.

Additional information may be obtained by calling Georgianna Fletcher, Manager, Project ACCESS, NCI, Inc., 5203 Leesburg Pike, Falls Church, VA 22041; (703)998-2400.

- 30 -

Exhibit 3

nci for your information

NATIONAL CAPTIONING INSTITUTE, INC.

DATE: October 1987

CONTACT: Don Thieme, Executive Director
Public Affairs & Development
(703) 998-2416 (V & TTY)

The 1987-88 Season of Closed-Captioned Programs

Seen Through NCI's TeleCaption Decoder

In the 1987-88 television season, there are over 245 hours of programming with closed caption each week, which includes approximately 100 hours per week if a TeleCaption decoder owner subscribes to pay cable TV. The following is a listing of those programs the National Captioning Institute (NCI) is closed – captioning. NCI encourages caption viewers to check with their local television guide for the most up-to-date listing or check PLUS, NCI's Program Listing Update Service, which appears on your TEXT Channel C-2 during ABC-TV network programs.

	DAY OF WEEK	HOURS/ WEEK	CAPTION SPONSOR
NETWORK: ABC	TOTAL HOURS PER WEEK:		22.0 PRIME TIME 3.5 DAYTIME 23.5 NEWS & PUBLIC AFFAIRS
Prime Time Programs			
Disney Sunday Movie	Sunday	1.0	Department of Education
Spenser: For Hire	Sunday	1.0	Capital Cities/ABC, Inc., Warner Bros., Inc.,
Dolly	Sunday	1.0	Capital Cities/ABC, Inc.
Buck James	Sunday	1.0	Tri-Star Television, Caption Club
MacGyver	Monday	1.0	Capital Cities/ABC, Inc.
ABC's NFL Monday Night Football	Monday	3.0	Capital Cities/ABC, Inc. Gallo Wines
Who's The Boss?	Tuesday	.5	Capital Cities/ABC, Inc., M&M Mars, Caption Club
Growing Pains	Tuesday	.5	Warner Bros., Inc., M&M Mars, Caption Club
Moonlighting	Tuesday	1.0	Capital Cities/ABC, Inc., ABC-TV Affiliates, Caption Club
Thirtysomething	Tuesday	1.0	Capital Cities/ABC, Inc.
Perfect Strangers	Wednesday	.5	LORIMAR Television

	DAY OF WEEK	HOURS/ WEEK	CAPTION SPONSOR
NETWORK: CBS	**TOTAL HOURS PER WEEK:**		**5.5 PRIME TIME 1.0 DAYTIME**
Prime Time Programs			
CBS Sunday Movie	Sunday	2.0	Department of Education
Everything's Relative	Monday	.5	The Coca-Cola Company, Caption Club, CBS
Cagney & Lacey	Monday	1.0	Department of Education
Tour of Duty	Thursday	1.0	New World Television, CBS
Falcon Crest	Friday	1.0	LORIMAR Television, Caption Club, CBS
Daytime Programs			
Mighty Mouse	Saturday	.5	Department of Education
Teen Wolf	Saturday	.5	Southern Star Productions, Atlantic Entertainment, Kushner-Locke, Inc., CBS
NETWORK: NBC	**TOTAL HOURS PER WEEK:**		**15.5 PRIME TIME .5 NEWS AND PUBLIC AFFAIRS**
Prime Time Programs			
Our House	Sunday	1.0	LORIMAR Television, NBC, Caption Club
Family Ties	Sunday	.5	Kellogg Co., NBC
My Two Dads	Sunday	.5	Tri-Star Television, NBC, Caption Club
NBC Sunday Night At The Movies	Sunday	2.0	Department of Education
Valerie's Family	Monday	.5	LORIMAR Television, NBC, Caption Club
NBC Monday Night At The Movies	Monday	2.0	Department of Education
Crime Story	Tuesday	1.0	New World Television, NBC, Caption Club
Highway to Heaven	Wednesday	1.0	Michael Landon Productions, NBC
St. Elsewhere	Wednesday	1.0	Department of Education
Cheers	Thursday	.5	Paramount Pictures Corporation, NBC
Night Court	Thursday	.5	Warner Bros., NBC, Caption Club
L.A. Law	Thursday	1.0	20th Century Fox, Ford Division, Ford Motor Company, NBC

	DAY OF WEEK	HOURS/ WEEK	CAPTION SPONSOR
America By Design	"	1.0	Corporation for Public Broadcasting
Great Performances	"	1.0	Corporation for Public Broadcasting
Silk Screen	"	1.0	Corporation for Public Broadcasting
Trying Times	"	.5	Corporation for Public Broadcasting
Adams Chronicles	"	1.0	Arco
Daytime Programs			
Sesame Street	chk lcl lst*	5.0	Department of Education, Children's Television Workshop
3-2-1 Contact	"	2.5	Children's Television Workshop
Newton's Apple	"	.5	Dupont
Reading Rainbow	"	.5	Department of Education
Weekly News and Public Affairs Programs			
Washington Week In Review	chk lcl lst*	.5	Corporation for Public Broadcasting, Public TV Stations
NETWORK: FOX BROADCASTING COMPANY	**TOTAL HOURS PER WEEK:**		**1.0 PRIME TIME**
Prime Time Programs			
Married With Children	Sunday	.5	Embassy Communications, Caption Club
The New Adventures of Beans Baxter	Sunday	.5	Fox Square Productions, Caption Club
SYNDICATION	**TOTAL HOURS PER WEEK:**		**54**
Jeopardy!	chk lcl lst*	2.5	Merv Griffin Enterprises
Wheel of Fortune	"	2.5	Merv Griffin Enterprises
The Oprah Winfrey Show	"	5.0	King World
Cheers	"	2.5	Paramount Pictures Corporation, Department of Education

* Check local listings for day and time

	DAY OF WEEK	CAPTION SPONSOR
Shelley Duvall's Tall Tales	"	SHOWTIME
Super Dave	"	SHOWTIME
Movies (approx 28 per month)	"	
HBO/Cinemax		
1st and Ten	chk lcl lst*	HBO
Glory Years	"	HBO
World Championship Boxing	"	HBO
The Original Max Talking Headroom Show	"	HBO
HBO Comedy Hour	"	HBO
HBO Showcase	"	HBO
Cinemax Comedy Experiment	"	HBO
On Location	"	HBO
Fraggle Rock	"	HBO
The Hitchhiker	"	HBO
Philip Marlow Private Eye	"	HBO
Movies (approx 42 per month)	"	HBO
The Disney Channel		
Selected Movies	chk lcl lst*	The Disney Channel
SPECIALS		
Presidential Speeches and Press Conferences	chk lcl lst*	Xerox Corporation

In addition, nearly 900 home videocassettes are closed captioned and available for rent or purchase in all video stores.

How are programs captioned by NCI identified?

Many newspapers and television guides use "CC" after the program listing. NCI's registered service mark is and indicates that a program is captioned by, and only by, NCI.

* Check local listings for day and time

PREPARED STATEMENT OF MR. ROBERT MAWHINNEY
CEO AND CHAIRMAN OF THE BOARD, XSCRIBE CORPORATION

RE: Addendum to statement presented October 21, 1987 to the Rules and Administration Committee regarding feasibility of captioning the Senate floor proceedings.

We think it is important to emphasis Xscribe's expertise in not only the area of live captioning, but also in our ability to eventually integrate captioning with the creation of the record in the Senate.

At this time, the creation of the record in the Senate is very manual and labor intensive and does not take into consideration the lastest technology available to streamline the creation of the final record. The same technology that will be used for captioning, i.e. the specialized writing machine which can instantly translate the court reporters steno into English, can be used in automating the creation of the record also.

The Xscribe system has been developed to automate many of the functions performed manually when creating the record of Senate proceedings, and is being used successfully to do so in courts around the country.

This automation, using a system referred to as Computer-aided Transcription allows the instantaneous capturing of speech with the specialized stenograph machine, the translation of that information to English, and the ability to edit and update the information on computer as well as the instant access to printing the final transcripts on lazer printers.

Xscribe's experience and knowledge in these areas can be indispensible in not only providing the captioning services to the 10% of our population who are hearing impaired, but also integrate the latest proven technology of automating the record and thereby reducing the overall cost of producing the record in time, personnel and dollars into the current manual system used by the Senate Court Reporters.

With our staff of experienced trainers we can train current Senate staff to utilize this technology to provide both captioning and computerized creation of the record.

We see this as a long term solution to solving two problems, access of the Senate proceedings by the hearing-impaired and controlling the rising costs of producing the record.

Rochester Institute of Technology

National Technical Institute for the Deaf
Office of the Vice President for
Government Relations, RIT
and Director, NTID

One Lomb Memorial Drive
Post Office Box 9887
Rochester, New York 14623-0887
716-475-6418

October 21, 1987

Ms. Martha Spenger
305 Senate Russell Building
Washington, DC 20510

Dear Martha,

Thank you for taking the time to discuss the hearing regarding closed captioning of the Senate proceedings that will take place during the Senate Rules Committee meeting.

As we discussed, I would like to add my support to the idea of closed captioning for these proceedings. As director of the National Technical Institute for the Deaf, I believe it is imperative for our young deaf students to have the opportunity to be fully apprised of what is happening in our government at the same time as all other populations. The hearing impaired should not find it necessary to be informed a day later than others simply because they must wait to read about the events in the newspapers. Closed captioning of these proceedings would have a very positive effect on the education, especialy as it relates to government, of all hearing impaired people. If I can be of assistance by offering testimony on this subject, I will be happy to do so.

Sincerely,

William E. Castle

William E. Castle
VP, Government Relations, RIT
Director, NTID

Alexander Graham Bell
Association for the Deaf, Inc.

3417 Volta Place, NW , Washington, DC 20007-2778 Tel: (202) 337-5220 Voice or TDD

Established in 1890 to encourage the use of residual hearing and the teaching of speech and speechreading.

Office of the Executive Director

October 21, 1987

Honorable Wendell Ford
Senate Rules and
Administrative Committee
Building SR-305
Washington, D.C. 20510

Dear Senator Ford:

The Alexander Graham Bell Association for the Deaf was founded almost 100 years ago by Alexander Graham Bell. Today Dr. Bell's organization is international in scope and works to provide information and education to hearing-impaired persons, parents of hearing-impaired children and professionals working with hearing impaired people.

On behalf of the Alexander Graham Bell Association for the Deaf, I would like to convey our strong support for captioning of proceedings. Our hearing-impaired members are most interested in full access to the deliberations of our elected leaders. We appreciate your concern and interest in this most important issue and look forward to the time when the hearing-impaired can enjoy the televised deliberations of their elected officials.

As Co-Chair of the Council of Organizational Representatives (COR) which is a public policy group of 10 major organizations serving the needs of hearing-impaired people, I would also like to indicate that I feel these organizations would also strongly support captioning.

Sincerely,

Donna McCord Dickman

Donna McCord Dickman, Ph.D.
Executive Director

DMD:rk

Kentucky School for the Deaf

ESTABLISHED 1823

DANVILLE, KENTUCKY 40422-0827
Telephone (606) 236-5132

John W. Hudson, Jr.
SUPERINTENDENT

October 23, 1987

Honorable Wendell H. Ford
United States Senate
Russell Senate Office Bldg.
Washington, D.C. 20510

Dear Senator Ford:

I'm writing to encourage you and the United States Senate to adopt a policy of requiring closed captioning of Senate televised activites. By providing closed captioning, schools throughout the nation like the Kentucky School for the Deaf will have the benefit of campus-wide captioned video material from Senate floor activities. What better way to increase language, reading, and social studies skills?

Those of us involved in this noble profession of deaf education have long advocated the opportunity for visual text by way of television. Most schools like KSD throughout the nation are equipped with campus-wide loop systems so that when closed captioned programming is presented, it becomes open captioned on our campuses. While only 30% of all deaf students are served at schools like ours, the other 70% would most likely have access to cable programs in their schools and with decoding devices could easily monitor Senate activities that were captioned.

Additionally, more and more deaf households are acquiring decoding equipment for personal use.

Senator, the best hope for the proper education of deaf persons is language acquisition. Positive action by the United States Senate will add to that opportunity for success.

We deeply appreciate all that you do for us here at the Kentucky School for the Deaf and in Kentucky.

Sincerely,

John W. Hudson, Jr
Superintendent

JWH/pj

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF EDUCATION

SELF HELP FOR HARD OF HEARING PEOPLE, INC.
7800 WISCONSIN AVENUE
BETHESDA, MARYLAND 20814
(301) 657-2248 (V) 2249 (TTY)

October 20, 1987

The Senate Committee on
Rules and Administration
FR 305
Washington, D.C. 20510
ATTN: Martha Spenger

SUBJECT: Making televised Senate floor proceedings accessible for hearing impaired viewers via real-time captioning.

Dear Committee Members:

Self Help for Hard of Hearing People (SHHH) appreciates this opportunity to provide written testimony on the issue of captioning the telecasts of Senate floor proceedings. We would have preferred to present oral testimony at the hearing on Wednesday, October 21; however, we were denied communication accessibility. A sign interpreter was listed as available but no other accommodation to hearing impaired people (e.g., an assistive listening system and/or oral interpreter) could be provided. Thus, hard of hearing people who do not use manual communication have been excluded from participation at this most important Senate Committee hearing.

SHHH is a national, non-profit organization for people who do not hear well but who are committed to participating in the hearing world. Many SHHH members have experienced hearing loss in their middle or later years. They used to hear; and when they did, they used to participate in all phases of life in America, including being able to listen to (and understand) debates on public issues. Now, because of their hearing loss, they need special accommodations in order to be able to maintain that involvement in national and local affairs.

There are millions of hearing impaired people in this country. Nearly one in every ten Americans now has a hearing loss. In the Senior Citizen population group, the ratio is one in every three people. Of this massive

20-million-plus Americans with hearing impairment, about 10% are considered deaf (no residual hearing, principal communication method being manual sign language); 90% are better categorized as "hard of hearing", with hearing disabilities ranging from mild (with some communication problems) to profound (with massive communication barriers).

Hard of hearing people are just beginning to learn to seek accommodations which might help them to continue to keep their place in the mainstream world-that world in which they used to, and still want to, belong. Captioning of television is one of those very important accommodations for hearing impaired people, whatever their degree of hearing loss. The printed dialogue along with the voiced narrative brings enormous improvement in comprehension.

The U.S. Senate has made the commitment to televise its floor proceedings so they may be readily accessible to the American public, now it needs to take a step further to ensure that it be accessible to ALL Americans. Television accessibility to persons with impaired hearing, who cannot hear or comprehend the oral renditions, demands captioning.

SHHH urges the U.S. Senate to mandate that all televised broadcasts of Senate floor proceedings shall be captioned.

Further, SHHH also urges that all Senate hearings open to the public be made communicatively accessible to all persons with impaired hearing by offering various modes of accommodation: assistive listening systems, oral interpreters and sign language interpreters.

Respectfully submitted,

Howard E. Stone

Howard E. Stone, Sr.
Executive Director

SELF HELP FOR HARD OF HEARING PEOPLE, INC.
7800 WISCONSIN AVENUE
BETHESDA, MARYLAND 20814
(301) 657-2248 (V) 2249 (TTY)

SHHH
FACT SHEET

SEPTEMBER 30, 1987

* More than 25,000 persons have joined SHHH since 1980.

* 220 chapters and groups are meeting in 43 States, with more continuously forming.

* Members in 17 countries including two National Offices (USA and Australia) and an affiliation in Canada.

* 10 full-time paid staff with a full-time volunteer Executive Director. 3 part-time paid staff.

* 16 States where OPERATION SHHH is being implemented. (Anti-Noise/Hearing Conservation Program for Children).

* 218 SHHH volunteers working in 135 nursing homes in 42 States and Canada.

* Shhh, A Journal About Hearing Loss, published bi-monthly in 43,000 copies and over 200,000 readers.

* Large print edition of Shhh in process. (Funding required)

* Extensive publications list from which to learn about many aspects of hearing loss, its complications and possible accommodations.

* Two international conventions held with two more in process (1988, Rochester, N. Y. - 1989, Bethesda, Maryland - Tenth Anniversary celebration).

* Training programs, workshops and conferences--an ongoing experience.

* SHHH travel tours geared for hard of hearing people.

* Working closely with major organizations involved in the problem of hearing loss.

* Assistive Listening Devices Demonstration Center.

* An inventory of places with assistive listening systems (PALS) in the U. S. Some 20,000 PALS are located in places of worship, theaters, community centers, libraries, etc. and allow hard of hearing people to participate in events not otherwise accessible to them. Upon request, hard of hearing travelers will be provided information about PALS at places in their itinerary.

* Distinguished Service Award for 1987 from American Speech-Language-Hearing Association.